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CONSUMPTION; ITS PREVENTION AND TREATMENT.*

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The old and trite saying that a nation's strength is a nation's wealth, is self-evident; that both are largely dependent upon its health, is a fact which is readily recognized by all who have given the subject proper thought. The preservation of health should, therefore, be the first duty of the physician to mankind. His second, that of restoring health when impaired. That old, common and ruthless destroyer of human life, consumption, may well engage our earnest attention. We will probably not be able to demonstrate any new theories, but propose only to speak of some of the more common, simple and avoidable conditions which ultimately lead to the development of tuberculosis.

More than a century ago, consumption was treated by some nations as a contagious disease. Tuberculous subjects were isolated with a view of preventing the spread of the disease by contagion or infection. Physicians were required to report all cases of the disease, and those afflicted were registered by the proper authorities as consumptives. All clothing, furniture, etc., used by them was either thoroughly renovated or destroyed. After death, the rooms occupied by them were rigidly disinfected. These regulations were enforced for a period of more than fifty years, with the result only of showing the futility of such measures. They will continue to be fruitless unless they are founded on a correct understanding of the way in which the contagious material is transmitted from one individual to another, the conditions most favorable for its reception and the liability to produce its characteristic results after finding lodgment in the system.

While the contagious nature of consumption was admitted at an early day, positive proof of its communicability was not furnished the profession until the researches of the immortal Koch were published in 1882, since which time, other bacteriological investigators have sustained his views by their investigations in this branch of medical science. The result and final conclusion of these experiments and investigations is that the exciting cause of tuberculosis is the tubercle bacillus. A logical sequence of this conclusion would naturally be that the disease is communicable and, consequently, preventable.

In the face of all the facts connected with the contagious character of the disease, the impression still exists to some extent that it is a matter merely of opinion; that equally competent and reliable authority is arrayed on either side

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of the question. With the laity and that part of the profession not given to investigation and who are skeptical as to the correctness of the conclusions of many of our more brilliant bacteriologists, the question will perhaps remain unsettled. While our facilities for the study of this branch of medical science are quite limited, we are disposed to give due credit to the teachings of those who are in position to be authorities upon this subject.

A knowledge of the more common causes of consumption is necessary for an intelligent and profitable study of its prevention and treatment. The facts connected with its causation and manner of transmission, I think are fully established, and are based upon careful experimental observations. There is little room for doubt or for difference of opinion regarding the main factors in its causation. Really none among those conversant with the scientific conclusions reached by the improved methods of the modern bacteriological student. To dwell on this particular line may seem superfluous, but we wish to be plainly understood as being a disciple of the teaching that there are only two principal conditions necessary for the development of the disease. This being true, all our efforts in the direction of prevention or treatment, should be to so change or modify these conditions that the ultimate result may be reduced to the minimum.

The two factors necessary to the development of tuberculosis, are the tubercle bacillus and the predisposition or condition of system favorable for the development of the disease after the reception of the germ. In all infectious diseases, there are two forces at work: *First*, the number and virulence of the germs that may gain admission to the body at any given time. *Second*, the resisting power of the system or its ability to successfully combat the poisonous influence of the infectious material and thereby render negative its results as regards the development of disease. The resisting power depends upon several factors, prominent among them being the avenue by which the germs enter the body, the vital condition of the tissues with which they come in contact, and the general nutrition of body at the time of exposure.

A large per cent. of people who are exposed to contagious diseases, are not attacked by them. Especially is this true of consumption. The explanation lies in the fact that the natural power of resistance to the tuberculous germs is so great at time of exposure that the disease is not contracted. The facility and certainty with which it is transmitted is minimum compared with many other diseases. Usually, protracted exposure to the infection, or intimate relation with those afflicted with the disease, is requisite; or, perhaps, the resisting power is such that it is easily overcome. Any influence of a depressing nature renders the system more susceptible, and hence the transmission of the disease more certain.

Of the two principal avenues by which the germs enter the body, the respiratory passages is far the more common; hence, anything that weakens the vitality of these parts renders individuals much more susceptible to the infecting influence of the germs. Unhealthy occupations, defective ventilation, imperfect nutrition, whether from improper food or from insufficient quantity, heredity, bronchial or pulmonary inflammations, and many other things might be mentioned as important factors in creating a soil favorable for the growth and development of the bacilli after reception into the system. These factors act as predisposing causes by rendering the resisting power less efficient in the fight for the ascendency between the cells and the germs. Yet, they only provide the predisposition; the fact, as taught by bacteriology, remains that no one, nor all of them combined, can produce the disease independent of the tubercle bacillus, which is the chief or exciting cause and without which tuberculosis is never developed.

The respiratory tract being the chief avenue through which the infectious material is received, and the germs being so universally present in the air, the inquiry will naturally arise, Why is it that so few become diseased, as compared with the great number who are exposed to the invasion of the bacillus by inhalation of atmospheric dust? Evidently the reason for this is the fact that a great majority of the people exposed, have an amount of resisting power sufficient to avoid infection by the tuberculous germ. The anatomical arrangement of the respiratory organs and the peculiar characters of the mucous membrane lining the bronchial

tubes, are such that all dust is lodged upon its surface and much of it is subsequently thrown off in expectoration. Tubercle bacilli are taken up in the same way and, often times, disposed of in a similar manner; or they may be retained until their vitality is destroyed and they become incapable of infecting the tissues in their characteristic way. In these cases there is a conflict between cell and bacillus. If, now, the mucous surfaces are healthy, the lungs in good working order, the cells entering into their formation vigorous and the general environment of the body not weakened, good health will be maintained. If the contrary, tuberculosis is more than likely to be developed. Inability to resist the special work of the tubercle constitutes a predisposition to the disease, and is much stronger in some persons than in others; but it is probably developed by a train of circumstances, similar in most cases.

In considering preventive measures, it is essential to look after some of the causes that lead up to the establishment of this predisposing condition. We make only general suggestions to the effect that it may be inherited, or acquired, or both. Children of consumptive parents do not inherit consumption, and many of them never have it; but they are more liable to be weak and unable to resist the influence of the disease-producing germ. This is not only true of the progeny of consumptives but those born of parents suffering from any malignant disease are quite liable to be deficient in physical ability.

Among the many causes leading to the acquirement of the predisposition, only a few need be mentioned: breathing impure air; the use of unwholesome food; the existence of other lung and bronchial diseases; want of proper exercise; abuse of the use of alcoholic liquors; disease of the kidneys—in fact, anything which leads to a deterioration of the general health, or a weakening of the tissues upon which the bacilli find lodgment. These various factors seldom act singly in the causation of consumption, but in the study of individual cases, we see the influence of many trifling circumstances, the combined force of which seems to act in one line, producing the disease.

In discussing measures to be taken for the prevention of consumption, a thorough conception of its communicability, curability and prevention should be had; and these propositions should be taught the laity, as well as the profession. The people should understand that, from a sanitary and economic standpoint, all other diseases sink into comparative insignificance.

It is usually so insidious and slow in its progress that its gravity is not realized; its ravages are so common that we become accustomed to them and are indifferent about adopting common, simple and easily applied measures for its prevention. Perhaps this indifference is due to the fact that much time often elapses after exposure to the exciting cause, before the disease is manifest; or it may not be developed at all. Again, we quite often hear the remark that the early symptoms are only "a cold," a bronchitis, etc., until such inroads are made that the adoption of any measures looking to prevention or treatment, avails but little. Consequently the laity regard consumption as meaning death, notwithstanding all the wisdom of modern medical science. The proposition is nevertheless true, that the disease is curable, and curable in quite a large proportion of cases if its nature is well understood; if it be recognized early and appropriate measures are employed to prevent its extension.

We urge the importance of more thorough education along this line; and expecially upon the two main points, namely, to correct the predisposition and prevent the reception of the tubercle bacillus into the system. These two things accomplished, its mortality record will be much reduced. While we may in this brief article, make only some general suggestions in this direction, we firmly believe that with our present knowledge and the methods at our command for studying the causation, dissemination, etc., of the disease, the time is not far distant when we will be able to formulate and adopt measures which will almost certainly prevent its occurrence. Of all the contagious diseases consumption is certainly one of the easiest to prevent, as it is one of the most unsatisfactory to treat after it is well established.

The first step looking to the study of preventive medicine, especially regarding tuberculosis, is to educate the people and

make them realize that a chief object of medical science is to prevent disease, as well as to treat it; also, that their coöpertion with the profession is essential if they would realize all that is possible in this direction. It should be the duty of sanitary authorities, both State and municipal, to employ comprehensive and efficient means for the prevention of tuberculosis. Need I say that these measures should be thoroughly studied and taught in a general way, by every practitioner of medicine? We should instruct the people relative to the communicable nature of the disease; instruct them as to the plans to be adopted to render the sputum innocuous; teach them how to prevent its being taken into the air as dust particles; inform them of the best method of caring for wearing apparel, disinfection of all clothing, etc.; in rooms occupied by the victims, the cleaning of walls, floors, furniture, etc. In short we should educate them as to a thorough renovation of everything that has been used in caring for a consumptive. We should recommend the establishment by law, of such measures as shall prohibit the employment of tubercular persons in factories, school-rooms and such other situations as will expose the health and endanger the lives of other people. We should urge the importance of sanitary regulations along the line of prevention of tuberculous dissemination in public gatherings, especially in halls, churches, school-houses, etc. We should teach that success in treatment depends materially upon an early diagnosis; consequently that a microscopical examination of the sputum in suspected cases will make our treatment more efficient.

In view of the transmission of disease by and through food products, certain regulations should be adopted by the government whereby dairy cattle should be inspected, together with those to be slaughtered for food. Slaughter houses, with their environments, should be under governmental supervision, as regards purity of meats; and all meat not thus inspected should be barred from sale, both public and private.

The establishment of hospitals by the public for the treatment of the consumptive poor, should be recommended in all localities where expedient.

The influence of our knowledge should not only extend to the community in which we live but to corporations which have under control the means of public travel, whose business it is to furnish conveyance from point to point through our country. We disapprove of the promiscuous occupancy of conveyances by well and sick alike, regardless of the nature of the ailments of the latter. We refer particularly to the sleeping apartments of steamships and railroad cars.

Regarding the merits of the measures suggested, opinions will justly differ both as regards the plans and the feasibility of their adoption. At this particular epoch in sanitary science, it is our opinion that some decisive steps should be taken in this direction. While we might not be able to establish any arbitrary rules, there would be germinating points, from the growth of which great good would ultimately come. In this way, our country would be made stronger; and as well suffering thousands relieved from disease and premature death.

We come now to the treatment proper, of which we shall speak in a general way only, making suggestions relative to the employment of drugs, diet, hygienic and climatic treatment, which we think may prove beneficial in a majority of cases as they present themselves for treatment. The management of each case should be a separate study, proper attention to which will suggest appropriate remedies. Reviewing the treatment, we find changes as radical, the benefits derived therefrom as great as are the improved methods of diagnosis. Depletion, stimulation and starvation in various ways entered into the history of the treatment of disease in the past, and tuberculous disease has been no exception to the rule. We find these methods have been strenuously followed, and we believe many times with disastrous results to those receiving it. This unscientific way of treatment has, perhaps, been largely responsible for the great mortality attending it, and for the lack of confidence regarding its curability which has prevailed among the laity. When the profession began to make a more searching inquiry into the etiology, treatment became more rational, with a gradual decrease in the percentage of mortality. The number of remedies employed has decreased, while the efficiency of those used is much more satisfactory.

In the general plan of treatment which

we would suggest, the environments or surroundings should first engage our attention. For the purpose of brevity, we will include under this head, the location and arrangement of apartments (if patients are confined indoors), the clothing, food, exercise—everything save drugs. Make the surroundings of every invalid such as to prevent all worry, anxiety, etc., so far as possible. If they must go down the declivity, help them go slowly. In short, our patients should have an abundant supply of pure, fresh air and sunlight; warm, clean clothing on a clean body; plenty of well prepared nutritious food, pure, rich milk, being superior to all others. Add to these such home influences as will make life worth living.

In the development of drugs, use only those whose therapeutic action would make them valuable in maintaining the normal physiological condition of the system in every particular. In this way, if any, we maintain a vigorous healthy action of every cell that is liable to attack by the tuberculous germ. If possible, maintain perfect digestion and assimilation, which secures good nutrition, for good nutrition to this class of persons means the perpetuation of good health and life—the opposite, disease and death. In our opinion, but few drugs are required to accomplish all that can be done in the way of medical treatment. Chief among these are iron in its various forms, quinine, strychnia, arsenic, creosote, iodide of potassium, the hypophosphites, cod liver oil, morphia, and a few others to meet special indications.

A judicious use of these remedies in appropriate cases, under the guidance of thorough and careful practitioners, we believe will cure many cases, prolong the life of others with comparative good health, and make the pathway to the grave of the incurable smooth, easy and without friction, so that their years of invalidism may be spent with as much comfort as is attainable by treatment.

THE EARLY DIAGNOSIS OF TYPHOID FEVER.*

PROFESSOR V. HANOT, PARIS.

Typhoid fever is one of those acute, infectious diseases which is most prone to an atypical course, which lasts longest, and for which responsibility weighs heavily on the physician on account of its attacking usually young persons, with their deep interests in life.

During all this morbid evolution, which is often so tortuous and deceiving, one will be under constant surveillance and be strictly judged. Therefore, have a care not to utter a word that may conflict with your ultimate diagnosis and never appear surprised; for the interest of the patient requires the physician to posses the full confidence of his friends.

It is true that the diagnosis is ordinarily easy and the treatment fixed by rule; but the disease may burst upon one at any time, and find him unprepared. On the contrary, if early appreciated the disease may often be kept within bounds and be led on to a favorable issue. Therefore study carefully each case of typhoid fever which you may meet and even if fortune forsake, you will be assured that you are worthy of the mission confided you.

How does typhoid fever begin? Here is the first stumbling block and not the least embarrassing of a medical career. The problem is often very difficult to solve. First of all, I would have you keep in mind that it is rare that typhoid fever begins suddenly with chills and fever, and that it is not a disease with a violent beginning as pneumonia, erysipelas or scarlatina, but that usually it developes in an obscure manner, and only little by little, after an undecisive course, does it assume a definite form.

When the pathogenic microbe has penetrated into the intestine it is not in the midst of an ideal culture medium as in the laboratory, but the field is already occupied by other germs which, to employ

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Metchnikoff's expression, act either favorably or unfavorably upon its development. Decreased or increased in morbid power by this first conflict it invades the organism which reacts and resists in a different manner according to the age, social standing, constitutional predispositions, former hereditary weaknessess, etc. From these proceed the differing variations of typhoid fever. Generally typhoid infection of the organism, whatever may have been the initial condition, reveals itself at a given moment by a thermic evolution, with a definite cycle, in three stages which are quite distinct: first, a stage of ascending oscillations; second, a stage of stationary oscillations; and third, a stage of descending oscillations. This is called Wunderlich's temperature curve. But this tracing is not exactly parallel for, before the invasion of the organism, the disease undergoes a preparatory elaboration which is performed in absolute silence or with badly characterized signs. Therefore, it is convenient to admit in this period of incubation—in this propyretic stage as Gueneau de Mussy calls it—a first phase which is absolutely latent, and a prodromic period, properly called, which is marked by the first appearance of malaise and even by a slight and irregular febrile movement. I shall tell you later that it is exceptional that one is able to obtain a complete tracing according to Wunderlich and especially if one attempt to discover the first elevation from a complete state of apyrexia. These are the signs which should be first tracked out and of which the exact interpretation should be made. This prodromic period represents, on a small scale, a typhoid fever which is germinating and extending. You have been able to form an opinion from the eleven cases of typhoid which we observed during the last six months. Let us take as a type the young clerk who lies in the sixth bed of the Magendie ward.

Aged twenty years, he has only been living in Paris for eighteen months, and has always been in good health. At his entrance into the hospital he had been sick for about a week, he having been seized towards evening one day with a feeling of weakness and with pains in the muscles upon the least effort. The next morning he felt somewhat better, but soon his usual work became too much for him; his sight became dim, his mind confused and for a short time he fell into a half stupor, after which he returned to his work. It was not long before he commenced to complain of his head, roaring in the ears, dizziness and chilliness. He staggered in walking and he was forced to leave his work before the usual hour. He went to bed feeling sore, depressed, restless and slept but little or none at all. He was entirely without appetite, with a bad taste in his mouth and a pasty coating on his tongue. He had had at the beginning alternating constipation and slight diarrhœa, with some colic. The patient thus tried for six days to keep at his work, but on the seventh, finding it impossible he entered our service. We found his mind clear, and about in the condition of the preceeding days, which he described to us with precision. The rectal temperature, on the evening of his admission, was 37.6° C., the next morning 37.2° C., that evening 37.2°, the morning following that day 37.4° and that evening 37.8°. From this moment it increased progessively, to attain four days after 39.4° in the morning and 39.9° in the evening, at which figure it remained, with variations of some tenths of a degree for twelve days, when it began to descend and finally entered into the apyretic period, during all of which time the characteristic symptoms of the disease developed.

The prodromic stage had lasted eight days and had presented the appearance of a shortened attack. You will remark that he has had no epistaxis. Epistaxis is an expressive and habitual sign of the beginning, but it is neither constant nor pathognomic. It is also observed at the beginning of other infectious acute diseases and again it may frequently be lacking. Thus, out of the twelve last typhoid cases we have observed it but five times. The statements of the patients should be received with caution, for we cannot always confirm them by those of the family. Therefore, ordinarily, the prodromic period is not characterized by anything localized nor conclusive; hence, here is the first difficulty.

You are called, for example, to a young man or a young lady whose health has been insensibly disturbed as in the case I have just related you. The parents are anxious; the parents are always ready to think their children attacked by typhoid fever, for they know that at their age they

are particularly liable to be attacked by this disease which has still a feared name. Therefore, they are all anxious and press you. They call you aside and put you through the same list of questions. What is it? Is it not the typhoid fever? Now, it is most frequently at this period impossible to give a decided answer. At all events, do not pronounce the word typhoid fever until absolutely certain of the diagnosis. Do not become frightened too soon and especially without cause. The friends will not pardon you for such a cruel error.

Therefore, examine your patient very carefully and attentively; be prudent and reserved. The case is possibly that of a candidate for an examination for a concours; possibly, that of a workman who has been overworked or undergone privation, or that of a high-liver who has given himself up to excesses. Think also of a gonorrhœa which might have been concealed. The patient is perhaps of a consumptive parentage and you are in the presence of one of those cases of tuberculosis with an insiduous beginning which bear the impress of typhoid fever. The case may be again that of a young girl who has been affected by a violent emotion. Is it hysteric fever? The patient is in the midst of an epidemic of grippe or typhus fever. Is it either of these? Remember that sometimes in tuberculosis the initial manifestations of syphilis are preceeded by a germinitive phase which is analogous to that of typhoid fever. You will call to mind each of the morbid states mentioned and remember how their respective beginnings differ from that of typhoid fever. Hold in mind, besides the time which the patient has been living in Paris or any other large city, the season, the coexistence or not of an epidemic of typhoid fever. Find out if he had the disease before, for recurrences are very rare, though possible.

In spite of all this it will be frequently more than once difficult for you to fix your diagnosis. Ordinarily, it must be admitted, the hesitation will not last long; the characteristic symptoms are not long in appearing, but often also the prologue will be very long and your indecision and embarrassment will increase. Therefore, you must know the possible duration of the prodromic period for it may be very variable. During the two years which I was interne at the Hospital Cochin under Bucquoy, which then had only one medical service, there appeared one day a young man who did not desire to enter the hospital, but only asked for relief. He complained of being without appetite and feeling weary. Nothing else was to be discovered and he was given a purgative and advised to rest. Several days after he reappeared feeling no better. His appetite and strength were still the same. No appreciable signs of fever could be discovered nor other typhoid signs. He again refused to enter the hospital. Several days later he again returned, but this time dragging himself along with difficulty, and accompanied by a comrade who had brought him in a carriage. His face, the state of his tongue and the fever could leave us no longer in doubt; it was typhoid fever.

As he had first been seen ten or fifteen days before, for the first time, one would think that he was least at the end of the first week of his disease, having had at the beginning a typhus levissimus or ambulatorius. Yet at the first examination in the ward we were able to find neither sibilant râles in his chest, nor the rose-colored "rash" upon his abdomen. His temperature did not go above 38°, and it continued to rise for two or three days, when the râles were observed and soon after the characteristic "rash."

The patient was therefore only at the second, third or fourth day of his disease and the preceding days of malaise represented the germinative or prodromic stage which is usually only four to six days. Now out of twenty cases where I have been able to note the prodromic period precisely, which was generally from four to six days, I have found seven where it lasted from fifteen to twenty days and further observation was able to prove that the ultimate course was not due to relapses but was marked by the grand characteristic lines and episodes of a typhoid attack. During these two years, where the conditions for observation were especially favorable, I have not been able to obtain a complete and tracing of Wunderlich's ideal temperature curve. Either the patients escaped observation during this period or they did not enter until the disease was well developed. Whatever it be that which I have stated is in accord with the statements of a large number of

writers. The prodromic period or that portion of the period of incubation which consists of the first malaise to the setting in of definite febrile symptoms lasts, according to Murchison, from one to several days; Griesinger puts it at two to five days as an average and sometimes even seven or to fifteen days and over; Guéneau de Mussy would fix it at two weeks, on an average, and sometimes even three weeks.

These variations should not astonish you for as I said before the pathogeny of infectious diseases is subordinate to a multitude of conditions. The organism may be more or less predisposed by former excesses or constitutional defects or the germ may be particularly virulent or associated with other pathogenic microbes. The microörganism does not present the whole morbidific power for the individual also plays his part. You perhaps are familiar with the fact reported some time ago by Quincke, of fourteen persons who had, at the same time, drunk of water contaminated by the dejections of typhoid patients and who were all seized with the disease in eight to ten days after, yet the mode of beginning differed notably.

Thus, in two or even three weeks, it may be impossible for you to make a visable diagnosis and do not forget how long it is occasionally necessary to wait. During this obscure period you should constantly keep in mind certain facts which will lead you through the difficulties.

In the first place, among the typhoid states without precise localizations which may be confounded with an incipient typhoid fever, you will be able to eliminate also completely, *a priori*, those which set in suddenly as gastric fever, the grippe, typhus, certain forms of malaria, herpetic and hysteric fever.

In gastric fever vomiting is much more frequent and albuminuria less constant, than in typhoid. In the grippe the temperature in the evening of the second or third day reaches 40° and even more; the profuse sweats occupy an important place while they are exceptional, in typhoid fever (except in the sudoral form of Professor Jaccoud). In the grippe, the urine more frequently contains an abundance of urobiline. Yet this disease and typhoid fever may coexist in the same person and develop parallelly. Professor Potain has called attention to this combination of which I have shown you every autumn several examples. With us the epidemics of grippe rage ordinarily in the fall months at about the time when the typhoid epidemics are inclined to diminish, so that our hospital often contains several cases of typhoid and the grippe at the same time. At a given moment it is possible to distinguish in patients the existence of signs common to the two diseases, but in the commencement, the distinction is by far not marked. Not to withdraw too far from the special point under consideration I shall simply state that usually it is the grippe which begins and even may persist after subsidence of the typhoid fever.

Typhus is to be differentiated not only by the appearance as an epidemic and the greater suddenness of its beginning, but also by the deep stupor which it characteristically produces. You know that for several years it seems to have acclimated itself here so that it is well to think of it.

There are also continued forms of intermalarial fevers as well as there are typhoids which affect an intermittent type; here the therapeutic test with quinine and the presence of Laveran's hematozoa in the blood will decide. The same holds good in those cases where the two diseases are associated, typho-malarial fever.

Herpetic fever when the eruption is confined to certain regions of the body, especially the genitals, may also simulate typhoid. Therefore, once more let me tell you always to examine your patients as our fathers said *e capite ad calcem*.

In hysteric fever the urine may remain abundant and clear (Hanot et Boix) and present the inversion of the phosphates as pointed out by Cathelineau and Gilles de la Tourette.

Do not forget that acute osteomyelitis usually sets in suddenly with a profound typhoid state without any definite local symptoms; cerebro-spinal meningitis nearly always bursts forth, all at once, with chills and a fever, with an initial temperature of 39-40° from the first day.

Let us now pass on to a second group of typhoid states which set in more insidiously and slowly.

Firstly, there is acute granular tuberculosis where, from the beginning, one observes fine and fleeting râles in the lungs, while in typhoid fever the pulmorary signs only are seen after the thermic curve is definitely established and then as sibilant

râles. If the râles have not already appeared the fever is active, in acute miliary tuberculosis, and often presenting the inverse type as described by Brunicke as characteristic of acute tuberculosis and in typho-bacillosis there is a disassociation between the pulse and temperature as pointed out by Landouzy. Often from the very beginning the pulse in typhoid is slower, while in acute tuberculosis it is accelerated.

Only very exceptionally is acute phthisis to be diagnosed by the discovery of tubercular granulations in the choroid, by the ophthalmoscope. Remember again, that acute miliary tuberculosis is much rarer than typhoid. Nevertheless, in a general way, it may be stated that the germinative period of all the great acute infections as tuberculosis, typhoid fever, syphilis can not be distinguished the one from the other, even phthisis and acute typhoid fever lack special distinguishing signs. At this period bacteriological examination of the blood will not give the result that it will later. Read in this regard the work of Villomin, where the illustrious physician emphasizes the resemblance of acute tuberculosis and beginning typhoid fever; he shows that they appear to be two modalities of the same general infection. Very able diagnosticians have taken a fever which might be called presyphilitic for a typhoid.

When you have passed in review those morbid states which I have enumerated, you might think also of a typhoid state dependent upon trichinosis or farcy.

In 1874, at the Hôpital Cochin, I saw a farrier who had been sent in by a physician in the city, as affected with typhoid fever. The disease had begun suddenly with chills, fever and headache; several days later the characteristic abscesses of farcy appeared.

There are besides acute cryptogenic infections of which the pathogenic microbe has not yet been determined. The clinician will finish by having impressed upon his eye and mind the physiognomy of the general infection, but what is the hidden germ which is destroying the organism? That is the difficulty which only clinical experience can solve, yet it does not always succeed. At other times the typhoid state is subordinate and dependent upon an acute and local lesion which is primary and predominant as in endocarditis, nephritis, typhlitis or meningitis. An attentive examination will enable one to distinguish the cause. You will have observed that during this entire discussion I have not referred a single time to the value of dicrotism of the pulse, enlargement of the spleen, the detection of Eberth's bacillus in the feces, urine or spleen.

Remember that this is only a question of the diagnosis of the disease at the beginning. Now, I cannot tell you whether the dicrotism is to be perceived in the prodromic period, or just before the period of ascending temperature, or how much time before. This will vary according to the case. Besides, dicrotism is observed in other infectious diseases, yet it is especially noticed in typhoid fever. Puncture of the spleen is not a practicable proceedure and the bacilli in the feces are said by Chantemesse to be difficult of recognition before ulceration sets in. Besides the bacteriologists differ on this point. In the feces of typhoid patients, Gaffky, Di Vesica, Pfuhl, Eisenberg, Rodet and Roux, Redtenbacher, etc., never were able to demonstrate by cultures, the presence of Eberth's bacillus; it was found several times by Pfeiffer, Seitz, Merkel and Goldschmidt; Villschour and Karlinski have never been able to isolate it before the second week. Chantemesse says that one will commence to meet with it from the tenth to the twentieth day.

Habitually, in typhoid fever, the spleen is increased in volume but it is not always so. Last week at the necropsy of the woman lying in the thirteenth bed of the Grisolle ward, who died on the twentieth day of typhoid fever, during which course we discovered a suppurating thyroiditis containing Eberth's bacillus, we did not find the spleen much enlarged; it weighed 205 grammes, measured ten centimetres in length and six in breadth.

On the other hand, an enlarged spleen is met with in typhus, also acute tuberculosis, the grippe and during the fever preceeding syphilis, as my regretted friend Quinquad demonstrated.

In several cases in the prodromic period of typhoid I have observed most frequently I was unable to determine if the organ was enlarged. It must be admitted that an increase in volume of the spleen is not always to be made out; though the German writers often speak of the spleen as

easily to be felt, percussion will furnish you with the most precise indications. Professor Peter laid great stress upon the pain provoked by percussion of the splenic region; that is a sign of infection but is not distinctive. Never forget when you have made out an increase in volume of the spleen, of asking whether the patient has ever lived in a malarial district or has had the malaria, for sometimes this is the only sign of palustral infection.

Since Dr. Vallin's monograph appeared, several cases of afebrile typhoid have been reported where the prodromic stage, the invasion and stage of full developement are thrown into one uniform course, without characteristics and not without peril. At the beginning it presents nothing particular, but it must be kept in mind that one does not confuse a feverless typhoid in full blast with a characteristic case having a prolonged prodromic stage. One might easily announce the near convalescence of the case when it is hardly established in its course, or, possibly while it is on the eve of a mortal complication. Beware of apyretic typhoid.

I once saw a young chlorotic girl who had been ailing for fifteen days without appreciable fever; she was livid, emaciated, no longer able to be on her feet; she was seized with epistaxis and metrorrhagia. A diagnosis of grave chlorosis from pernicious anemia was made. Death took place one night and the necropsy revealed Peyer's patches in the intestine to be ulcerated, with intestinal perforation and subacute peritonitis.

Another time I was called, with three of my colleagues, to a lady aged about sixty, who had lost a daughter from typhoid fever. After her death she fell into a state of profound depression which was thought due to her sorrow. She was abed, motionless and pale. It was a question whether she was not infected at the same time as her daughter who lived with her. But the rectal temperature never reached 38° C.; besides we could not discover any "rash," and a very thick layer of abdominal fat prevented an examination of the spleen. We therefore hesitated at a diagnosis when a mortal hemorrhage from the intestines put an end to the disease. In typhoid fever without elevation of temperature, all chronological distinguishing features are wiped out and one is obliged to wander about without a guide.

I have shown you the first difficulties which will present themselves to you. Though the prodromic stage may be prolonged it may, on the contrary, last but a few days. The condition of the patient aggravates, the weakness increases, headache remains intolerable and is often accompanied by epistaxis; to be about becomes impossible, diarrhœa appears, the nights are passed without sleep and restlessly with some delirium, the fever rises, the pulse becomes dicrotic, the tongue dry, the belly tympanitic, the spleen swells and albumen appears in the urine. The picture is then characteristic, especially as I repeat, if it be a young man or a young girl who has but a short time before come to Paris and an epidemic is raging. I emphasize these words, *young man, young woman* for, according to the age, the picture will change.

Thus in children, on account of the particular sensitiveness of the nervous system, the disease often begins with delirium and convulsions which might lead one to think of a meningitis, or by abdominal pain and vomiting, which might induce one to diagnose peritonitis. In old persons the commencement is often insidious, most generally without headache, without epistaxis, with abdominal symptoms and almost without fever.

Even in the ordinary cases of the young man and the young woman one may encounter another difficulty. Sometimes the disease will begin with a maximum of concentration of the morbid agent or by a localization in some other region than the intestine, a sort of heterotopia.

In several cases reported by Drs. Jaccoud, Duguet, Lecorché, the affection began by a tonsillitis and it was only later with the appearance of characteristic symptoms that it was recognized that a masked typhoid fever was developing. I had seen just such a confusing case during the last year of my time as interne, and the circumstances remain graven into my mind.

One of my friends was seized with an intense tonsillitis; nevertheless he continued at his work in the hospital. For about two weeks we saw him pale and wan, stretched out every afternoon in the easy chair of the watch-room taking with

difficulty a few teaspoonfuls of porridge. He only complained of his throat, which seemed to explain everything. Finally, unable to bear up longer, he left Paris to go to his parents. The same day of his arrival there, after the first meal with his family, he died of intestinal perforation.

At other times it is pneumonia which opens the scene. Professor Potain, in his lectures, has pointed out the mode of its beginning. Gerhardt and Lépine have also published several cases under the name of pneumo-typhoid. I have also recorded a typical observation, in 1884, in the thesis of Dr. Mulette. In a case reported by Dr. Lecorché, a pleurisy seemed to have been the initial phenomenon. Besides, do not forget that cerebral symptoms may burst forth with great violence during the first days under the form of mania. Patients have been sent to asylums for maniacal symptoms which masked a typhoid fever. Soon the disease was manifest enough, while the mental complication went on to decrease or disappear. Take care not to fall into such an error which may be so disastrous in many ways. Quite a while ago I observed two cases of typhoid fever commencing by melancholy and delirium de grandeur. You may find them in Dr. Barbelet's thesis (1874). One of these was a young woman who accused herself of having drowned her two children, groaning without cessation and demanding mercy; the other was a man who thought himself director of the opera and distributed tickets to boxes to those about him. These two patients had been sent to the Sainte-Anne Asylum where the diagnosis was rectified a little latter. Dr. Bucquoy and I, in our monograph on the delirium of typhoid fever, have treated of these pseudo-manias of the beginning of typhoid fever.

Without having exhausted the subject of typhoid fever, I think I have dwelt long enough on the subject to teach you prudence and reserve.

ACUTE BRONCHITIS IN CHILDREN.

W. B. MOORE, M.D., Woodburn, N. C.

Bronchitis of infants has, it seems to me, enough of interest to be spoken of at some length, but such is not my purpose. I have noticed that this subject has been somewhat neglected in medical journals.

Bronchitis occurs both as a primary and secondary disease. It is primarily caused by sudden change of temperature, from warm to cold, exposure to currents of air and the carrying of children, insufficiently clothed, from heated rooms into the open air, also throwing off the bed clothes during sleep.

The causes of secondary bronchitis are obviously the diseases in connection with which it occurs.

Bronchitis is generally bilateral except when due to tubercles or to pneumonia, then it is often confined to the tubes nearest to the diseased area.

Of the symptoms are flushed face, headache, acceleration of the pulse, fretfulness, with lessening of the appetite, and increased respiration according to the intensity of the disease.

On auscultation are heard coarse râles. At first sibilant and sonorous râles, at which times the secretion of mucous is scanty. The cough, in the commencement is for the same reason dry. It gets looser by the second or third day. Unless the child has reached the age of four or five years, expectoration does not take place; phlegm is usually found in the stools in either case; the color of the stools may also be changed to a greenish hue from an improper diet or germ, with a bad odor attending the stool.

Treatment should be both external and internal.

A poultice should be applied to the chest. The one I have most frequently used is made of wheat bran, about one and a half pints, to which should be added enough boiling water to steam, placing the bran first in a heated vessel. When thoroughly steamed put into a muslin bag. On the side to be placed next the skin, sprinkle spirits of camphor. Use as hot as it can be borne, first testing it

with the back of the hand or cheek. When this is in position fold a piece of flannel, or better use a piece of oil silk as a covering for the poultice to retain the heat and moisture. See that the child is sufficiently clothed and that the poultice is changed several times during the twenty-four hours.

I would advise castor oil or compound licorice powder in sufficient quantity to cause at least two evacuations daily.

Give quinine every six hours according to the age. During the day I use a weak syrup of muriate of ammonia, containing about one grain to a teaspoonful, of which I give a half-teaspoonful every four or six hours, as the case may demand. At night I give four drops of a solution, composed of equal parts of syrup of ipecac and paregoric, *pro re nata*, to allay irritation of cough, that the little one may sleep.

Give three doses of calomel at the beginning of the treatment, one dose each day, as it will lower the temperature, prevent the formation of fibrin and thereby lessen the possibility of pneumonia.

As to diet, for those not weaned the mother's breast, which should not be given too often, is best. For older children cow's milk and bread, butter and soups of various kinds. Fruits may be given in reasonable quantities. Food should be given at regular intervals of three or four hours, in smaller quantities than is required in health, as overfeeding is deleterious.

Care should be used in not giving the ammonia during the administration of calomel.

During convalescence increase the diet, continue the laxative, lessening the cough mixture as the case demands.

"PARACUSIS WILLISII," AND BOILER-MAKER'S DEAFNESS.

LAURENCE TURNBULL, M.D., PH.G., PHILADELPHIA, PA.

A symptom which we find in the adhesive processes in chronic diseases of the middle-ear, is termed "Paracusis Willisii,"—that form of deafness in which the patient has the power of hearing better in a noise. As it is a peculiar condition we give the details of a recent well-defined case which was sent to us by an aural and ophthalmic surgeon of this city for special treatment with the vibrometer.

Miss I. G., aged thirty-five years, a native of New Jersey, has been deaf since March, 1892 (and we suspect before this period); has a brother and sister deaf; the mother died at the age of thirty-seven years, of phthisis, but was not deaf.

When we find a history of death from consumption in the mother it is apt to be followed by deafness in some of the children, even when the father is healthy. The father in this case is healthy and aged sixty-six years. The young lady has never had any disease except the measles when two and a half years old, had no noises until recently; now there is "sort of heart beat" and "like a sea shell," and when chewing a sound "like a bell ringing" is heard. She has been carefully treated for a long time without benefit, indeed in her left ear she is profoundly deaf.

The question of an operation in her case was discussed by two able aural surgeons and the suggestion of an excision operation for the removal of the incus. But it was decided before taking this step to make a small opening in the drum-head and note if any increase of hearing resulted. If there had been, they purposed making a larger opening and removing the malleus, at the same time attempting to mobilize the stapes if the ossicles were within reach and were found to be fixed. No improvement whatever resulted and, as the lady was exceedingly nervous—probably as a result of a long winter of hard work—all idea of operative procedure was given up.

The opening has closed up by cicatricial tissue. She has had no pain whatever at any time; is able to hear the tuning fork in air, and on every part of the head, even the musical note within the half an inch low-toned fork; high C fork not so well heard. Delstanche's inflater in the left

ear promptly caused movement, coming up with a snap. In the right ear it caused inflation like a balloon. This was also noted by examination of the drum membrane. Employed the vibrometer with the pounding arrangement and so-called exhauster; the feeling in both drum membranes was of tickling, but no exhaustion or drawing like that produced by the former instrument.

After ten minute's use of the vibrometer, she stated the sound was like a buzz saw. Then followed the use of the strings: first and highest musical note like a bell; second string like a whistle; third and fourth strings more agreeable, like a humming.

The diagnosis was chronic adhesive catarrhal disease of the ear with symptoms of "Paracusis Willisii," or the power of hearing only when in a noise or rather when the auditory nerves were mechanically set in vibratory motion (concussion).

After treatment, with the instrument prolonged for six weeks, she was not improved, and we then resolved to the use of Pilocarpin Mur. hypodermatically gradually increasing the dose from one-sixteenth to one-fourth of a grain which is now employed, to be followed by the syrup of hydriodic acid.

Thomas Willis*, a careful English observer, recorded two interesting cases: One of a cobbler's son who could best hear when his father pounded leather on his lap stone. Another was a woman who could hear her husband speak only when a servant was beating a drum. We have had a number of cases where the patient heard best in a carriage rattling along the road, or in a railroad car, or when machinery was in active motion; the moment these sounds stopped the deafness returned. Such was the condition in this case. Otologists, as a rule, look upon this symptom as most unfavorable.

We felt that in the case reported the vibrometer was a means of confirming the original observations of Willis in this disease, in which he found that with relaxation of the membrana tympani the normal tension could be restored by noise or vibration. In addition, Politzer thinks vigorous mobilization of the ossicular chain causes it to be released from the fixed position it has assumed and it is thereby better adapted for the transmission of sound. By reference to the writer's work†, it will be found the dissonance of the organ of Corti may have reference to a single or to a whole succession of tones, which may be transient or permanent, and is the result of disease of tympanic origin, or of severe concussion of the labyrinth from a blow on the ear, or of the intensity of sound acting upon the whole nervous system.

*Opera Omnia Amsteriedamia apud Henricum Wetsteinum. Pars physiologica. Cap. XIV, p. 67, 1700.

DOUBLE HEARING (PARACUSIS DUPLICATA.)

We have noticed this in patients with purulent inflammation or middle-ear disease. Singers are apt to have this condition and it seriously interferes with their work. As a rule, this is the result of simple catarrh of the middle ear, to be treated by applications of Politzer's air douche or the catheter, with middle-ear injections of a solution of muriate of ammonia, ten grains to an ounce of warm water.

PARACUSIS LOCI.

Still another condition, in which the patient cannot locate the direction of the sound, is found in cases of chronic middle-ear disease, more particularly of the sound conduction apparatus in the labyrinth, or in unilateral deafness. This condition is of grave importance in railroad engineers and sportsmen, where hearing must be assisted by vision.

BOILER-MAKER'S DEAFNESS.

We have another form of deafness due to disease of the acoustic nerve produced by loud and continuous noises, called boiler-makers' or mill-operatives' deafness. It is stated that they hear so badly in their shops that they have a language of signs that is quite elaborate (Roosa). It was supposed at one time that they could hear better in a noise, but this proved to be false, as they are found to hear no better in a quiet place (Holt). Some persons who suffer from a certain form of middle-ear disease are able to hear in the noise of a railroad train or a carriage, but on entering a mill or a boiler maker's shop will hear better. This has been proven in numerous instances.

†Clinical Manual of the Diseases of the Ear, 2d Edition, p. 331.

COMMUNICATIONS.

THREE OPERATIONS FOR EXTRACTION OF CATARACT—ONE ARTIFICIAL RIPENING OF SENILE CATARACT.*

JAMES MOORES BALL,† M.D.

I always extract without it, unless a specific reason exists for the making of an iridectomy. This is a more difficult operation but, if all goes well, the patient is left with a nice round pupil, in place of the large coloboma of an iridectomy.

CASE I. The first patient, a colored woman who does not know her age, presents bilateral cataract. Each eye is ready for operation so far as the ripeness of the lenses is concerned. We will operate upon the left eye. The patient's face has been thoroughly cleansed, the conjunctival cul-de-sac washed with a 1:2000 solution of bichloride, and cocaine has been instilled. We insert the Knapp speculum; you will notice the palpebral opening is unusually small, causing the woman to look like a Mongolian. The distance from the inner canthus to the root of the nose is greater than usual, and the eye is small. This state of affairs will make the operation more difficult than usual. Not being ambidextrous it will be necessary for me to stand in front of her in operating upon the left eye.‡ A few instruments are now handed to my assistant and we begin. The eyeball is turned downward by forceps held in my left hand and a small Graefe cataract knife is passed through the apparent corneo-scleral junction and brought out at a point opposite. Now by a gentle sawing motion the cut is made, the knife is laid aside, a cystitome of the angular variety is passed into the eye, turned on its axis, and made to incise the anterior capsule of the lens. Now, stepping behind the patient, I take the cataract spoon in one hand and a spatula in the other and deliver the lens. You will notice that considerable pressure is required—more than in the operation with an iridectomy, since the resistance of the iris must be overcome. The iris, by its own elasticity, withdraws into the eye, but the pupil is not in the center of the cornea. After cleansing the eye of all fragments of cortex we will gently stroke the iris back into place, leaving it with a central pupil. The speculum is now removed, the lid is closed gently and a moist dressing of bichloride applied. The other eye will be bandaged.

CASE II. This man, Mr. H., aged sixty, a German, was operated on some time ago by some one who removed a cataract from his right eye; the result was not satisfactory and he wants me to remove the opaque lens on the left side. He cannot count figures but readily tells the location of the windows. Having him well prepared for the operation I will now remove the cataract. This is a much easier case upon which to operate. The eye is of good size, the palpebral fissure of normal width, and everything promises a good result. You notice that I pick up another knife, it being my practice never to use a cataract knife the second time without sharpening it. The knife and other instruments are dipped into boiling water for a moment. I pass the knife in the usual manner and the section is made without a hitch, and those who are near to the patient will notice how the cornea collapses after the cut is made. The capsule is now ruptured in the usual manner and the delivery effected without difficulty. The dressing of this eye will be similar to that of Case I.

CASE III. This old negro, like many of his class, does not know his age, but he appears to be about seventy. He has been blind in both eyes for three years. Each lens looks white like milk, and it is in such eyes that we find Morgagnian cataracts—one with a hard nucleus sur-

* Clinical Lecture.

† Professor of Ophthalmology and Otology in the St. Louis College of Physicians and Surgeons; President of the Tri-State Medical Society of Iowa, Illinois and Missouri.

‡ The writer has recently learned to extract cataracts with his left hand.

rounded by liquid. You will observe here a marked arcus senilis. This, however, has no bearing upon the healing of the wound. The usual incision is made, only smaller than in the preceding cases; the capsule is ruptured and now you see the milky substance running out of the capsule. It is a case of Morgagnian cataract. The hard part of the lens is delivered through the natural pupil. In this case the iris remains in contact with the lips of the wound. The pupil has been cleaned of all débris, and the iris has been stroked back into place, but immediately prolapses. Perhaps the use of eserine solution would keep it in place, but I will not take any chances. The iris is cut off, the angles of the iris are freed from the corneal wound and the usual dressing applied.

CASE IV. This man has noticed failing vision for two years. Inspection shows bilateral immature cataract. He readily counts fingers at six feet. It is in such cases, where both lenses are becoming opaque slowly, that an operation for artificial ripening is indicated. There are many methods of procedure, all of which have been advanced since 1881, when Foerster, of Breslau, began his operations. He was in the habit of making an indectomy, after which massage of the lens was made by a strabismus hook, the collapsed cornea intervening between the lens and hook. It is an indirect method. The operation which I prefer, and which bears Bettman's name, is a direct trituration. The pupil is widely dilated by atropine, the usual antiseptic and cocaine solutions applied, and we commence. I introduce a keratome into the anterior chamber, not for the purpose of performing an iridectomy, but simply to make an opening. Through this opening a spatula is passed, and by a concentric motion the anterior capsule of the lens is triturated. Care must be taken lest we rupture the suspensory ligament and get inflammatory symptoms. We desire to break up some of the fibres of the capsule so that some of the aqueous humor may come in contact with the lens. The lens will absorb the aqueous, swell up and ripen in a few weeks. Hence, such cataracts which otherwise might require years for maturity, will often be ripened and removed within five or six weeks. The spatula is withdrawn, a few more drops of atropine instilled and the eye is bandaged. The nurse is instructed to apply atropine twice a day and the bichloride dressing is used.

As you see, I have made no attempt to hurry. While everything is properly planned and systematically executed, an oculist can remove a half dozen cataracts within the limit of an ordinary clinic hour.

Dietetics of Chronic Heart Diseases.

Dr. Glax (*Deutsche Med. Zeitung*) calls attention to the value of decreasing the ingestion of fluids in the management of chronic diseases of the heart, a view which was warmly advocated by Oertel and others, but which has been too much neglected. If one carefully measure the quantity of fluid drunk and the urine excreted them one will remark a striking difference, for a certain portion of this fluid is retained to burden the heart's action. With withdrawal of a portion of the usual quantity of the fluid taken a continuous improvement will be noticed. From a study of this question in a large number of cases, which extended not only over months but even four to five years, he comes to the following conclusions:

1. Restriction of the quantity of ingested fluids is one of the most important measures in the treatment of chronic heart diseases, and of itself is often sufficient to bring about compensation.

2. In many cases where cardiac stimulants have failed their action will become apparent as soon as regulation of the quantity of fluid is carried out.

Care should be taken in reducing the quantity of water, as that might give rise to grave disturbances. Heart patients are especially prone to drink more than normal, which, by filling the stomach and pressing upon the diaphragm, obstructs heart action.

Rest After a Meal.

No work of any kind should be done in the hour after dinner. After any substantial meal, observe, you need all your vital force for the beginning of digestion. For my part, I always go to sleep after dinner, and sleep for exactly an hour, if people will only stay away; and I am much fond of the people who keep away from me at that time than I am of the people who visit me.—*Edward Everett Hale.—Ex.*

A UNIQUE CASE OF DOUBLE EXTRA-UTERINE PREGNANCY.

J. M. DUFF, M.D., PITTSBURG, PA.

Two years ago this month, I was called to see a woman twenty-eight years of age. She had been married for five years and never had been pregnant. At this time she had not changed for two months. Was complaining of pains in the left iliac region. I found some tumefaction. Upon a more careful bimanual examination, I diagnosed a tumor which was evidently in the left fallopian tube. The presence of this tumor in connection with the fact that she had not menstruated for sixty days, that she had morning sickness to a slight extent and some other signs of pregnancy, led me to diagnose an extra-uterine pregnancy. I advised an operation. She partially consented to it. My friend, Dr. Werder, saw the case with me. I believe he agreed with me in my diagnosis of extra-uterine pregnancy. Shortly after this the lady was suddenly taken ill and I was called in hastily. She had severe pains and a tendency to faintness, but did not entirely faint away. By the time I reached her she was flowing and upon examination I found that the tumor had disappeared from the tube. I could not find it. After this she improved rapidly and in a short time she did not call for any further medical assistance. Occasionally during this time, and subsequently, she had slight pains in the lower portion of the abdomen which were periodical in character until last March when she again missed her changes. About nine weeks after changing she was taken with hemorrhage. I was called in and found she had miscarried. The ovum was expelled from the uterus into the vagina. She got along very well after this up to the 12th of October of this year. On this date her husband came running to my office asking me to hurry to his home, stating that his wife had suddenly been taken ill. It was a very short distance to the house and when I arrived I found her in the water-closet. She was in a semi-comatose condition. Partially collapsed and almost pulseless. I had her removed to her bed; warmth and friction applied and stimulants administered hypodermically. When she recovered her senses she complained of very severe pain in the iliac fossa. She was so tender that it was impossible to make an examination by vagina. Upon further examination, however, I found a tumor in the right fallopian tube. I then got the history that she had missed her changes twice, it being ten weeks since she had menstruated. On the next morning she began to waste slowly. Some discharge of membrane. Some sickness at the stomach. I again diagnosed extra-uterine pregnancy, but in the right side, and insisted upon operation. She would not consent, thinking she would get over it in the same manner as she had the previous one. But she gradually grew worse up until October 18th, when she consented to the operation. She was taken to the South Side Hospital, and assisted by Drs. Kerr, Thomas and other members of the staff, operated.

I found a tumor in the right tube which was almost on the point of rupturing. The tumor had the appearance of a mole pregnancy as we find them in the uterus. On cutting it open we found a small fœtus enclosed in its membrane inside of it, needing no further demonstration that this was a case of extra-uterine pregnancy. We found on the left side another sack which was attached to the fallopian tube and contained some matter which was considered by all who saw it to be placental tissue. It was attached to the bowels by general adhesions; instead of dropping down it was thrown up over the uterus. A small portion of the end of the tube had split open.

The subsequent history of the case is good. There was an uninterrupted recovery. Her temperature after the operation was 101°, but soon became normal. During the third week after the operation some little indiscretion in eating caused the temperature to rise to 100°. She left the hospital last week and went to her home, her general condition being very good. I report this case as a very unique one, involving as it does a double extra-uterine pregnancy.

DEATH RESULTING FROM HEAD INJURY.

C. C. HERSMANN, M.D., PITTSBURG, PA.

Thomas F., aged forty-eight and a half years, I saw in consultation with Dr. P. G. Rossman, and obtained the following history: On March 4, 1887, while on duty as turnkey at the twenty-eighth ward police station he, was assaulted by a prisoner who struck him several (5) severe blows upon the head, making as many cuts or scalp wounds, rendering him unable to cope with his assailant.

He was removed to the Mercy Hospital, where he remained thirty days, during the first nine of which death was expected at any time. He went to work on the 15th day of the following October. He worked about two weeks when he was compelled to give up. At the end of seven weeks he returned to his work, but after another two weeks was again obliged to lay off. At the end of five more weeks he again went to work and was able to continue for nearly a year. He then laid off with severe pain in the right ankle. Again he worked three months and then was laid off five months with pain in all the extremities, upper and lower. The right side seemed to be particularly involved. From this time to his death he suffered more or less with severe pain in the head. He was able to work only a few days at a time when he would be compelled to lay off on account of severe headache. Thus he dragged through life. Whenever he had sickness with elevation of temperature he was very delirious. On March 6th, 1894, I was called in consultation, as stated in the outset, and found the following conditions: A slight pneumonia, severe congestion of the brain and elevation of temperature with acute delirium, he having to be held in bed. On the 9th I again saw him and found him much the same except a semi-comatose condition had taken the place of delirium. He died within the next twenty-four hours with symptoms of apoplexy.

A post-mortem examination revealed the following conditions: A scar immediately above the left temple 1⅝ inches long, and one in the corresponding region on the right side 1¼ inches long. A scar directly between the parietal bosses in the region of the crown on a line with the longitudinal suture two inches long, and a scar at right angles with and crossing the aboved-name about mid-way, four inches long. The scalp at the crucial scar was adherent to the skull. On attempting to remove the calvarium, the brain and its membranes were so adherent that, be careful as I might, the cerebrum entire was torn from its position and afterwards removed from the scull-cap by breaking up the adhesions.

Pia mater severely congested. On that portion of the brain corresponding to the top of the head, there was a free exudation which was rapidly approaching pus formation. The brain was severely congested throughout, the upper portion of the cord and medulla congested. A considerable meningitis had developed.

An interesting point in this case is the fact that he not only retained his mental faculties, but he was so materially affected whenever undergoing systemic disturbances, that he must have been on the border land of insanity. Another instance in which we see the wonderful power of nature resisting the inevitable to the last.

The party who committed the deed was sentenced and served time for aggravated assault. The medico-legal point is this: Having every evidence that the injury was the cause of death, can the accused be re-arrested and made to answer to the charge of murder?

Mercurial Paste for Corns.

Morrison.

Bichloride of mercury	gr iv
Salicylic acid	3i
Collodion	3i

Sig. Apply every day, removing each time the film left by the previous application.

—*Nouveaux Remedies.*

Sluggish Conditions of the Liver.

Podophyllinæ	gr xv
Euonymin	gr iss
Extract Belladonna	gr ¼
Pil hydrarg	gr ii

For one pill to be taken at bedtime.

—*Medical Press and Circular.*

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SATURDAY, MARCH 9, 1895.

EDITORIAL.

AN OVERCROWDED PROFESSION—THE REMEDY FOR THE EVIL.

Some years ago, there was much editorial amusement over a very ungrammatical letter of indignation which a recent graduate in medicine had written after his failure to pass an examination for appointment to a hospital as interne. In language which was unmistakable in meaning if not correct in form, the doctor asseverated that he had been *defrauded* by the faculty which had graduated him. He was evidently convinced of the justice of the decision of the examining board, for his grievance was that, *knowing his lack of preliminary education*, the faculty had encouraged him to pursue a medical course, had taken his money and had given him the legal right to practice a profession, for which he now realized that he was incompetent. He further accused the faculty of desiring to have just such incompetents in the profession for the sake of obtaining fat consultation fees.

We feel that the ridicule heaped on the writer of this letter was most unjust. Lack of education is a misfortune oftener than it is a fault, and there are thousands of persons who cannot use their own language correctly who are, nevertheless, good citizens in every sense. The fault lay with those agencies which tried to lift the man bodily from that plane on which he could be a useful member of society, to a higher one in which he would not only be out of place but would be in a position to inflict much damage. When one has the manliness to admit that he has made a mistake and that he is not fit for the position he has tried to occupy, he deserves sympathy and respect, not ridicule. In his accusation of his faculty he may or may not have been justified. There are medical professors who deserve the scathing rebuke which this ignorant man has uttered, and there are others who are thoroughly conscientious in their relations with student, colleagues and laity alike.

In this anathema, however, we find the

keynote of the entire theme which we are discussing. Outside the struggle, we have an apathetic laity whose only apparent interest is the fear that the medical profession may do something that will interfere with its inherent right to consort with sectarians and irregulars and to take quack medicine. On the one side, is the rank and file of the profession struggling for a livelihood; on the other, the college faculties, whose members feel but slightly the growing hardships of competition, while they are directly benefited by the prestige of their position. The fees of students may amount to comparatively little in the revenue of college professors, as a considerable attendance is necessary merely to pay the running expenses of the college. The real object of securing a full attendance of students is the greater honor which it will confer on the institution and those connected with it, and the wider territory over which the fame of the faculty will spread.

In a country supplied with a few colleges under state supervision, with faculties chosen impartially and comprising men of pre eminent qualifications, it would be an easy matter to limit the number of graduates. The present system of semi-private corporations has tendencies which work in a vicious circle. It is possible to select from the profession of almost any city of 200,000 inhabitants, at least three groups of doctors whose average abilities would equal or excel those of the faculty of an average medical college. It would be possible, in addition, to select two or three other groups, lacking somewhat in professional attainments but with greater business acumen and fully awake to the advantages of college professorships. The result is obvious; a combination of brains, business and brass is effected, and a new *University* (*!*) springs into life.

In a certain city is a medical school of fair reputation, abundantly able to supply the needs of the entire territory which it would naturally drain. After a time another college is started, the members of the faculty gladly paying heavy assessments to keep it running. Why? "Because the old school is not adapting itself to newer standards of education," say the faculty of the new one—in public. "Because there are a lot of men here who want to be professors and can't get into the old ring," says one of the new faculty—in private. And yet, the majority of the members of the "new ring" "are men of as great tability as those of the old ring," and have the same right to the gratification of their ambitions. It is no uncommon incident in modern times, to find three or four men competent to fill a position which all want and which only one can have. The result is sad but inevitable. There are individual cases in which influence and money have elevated to superior positions men of inferior qualifications. As a rule, in the case which we are considering, influence and money have simply been the determining factors in choosing between men of equal ability. The profession as a whole cannot blame, and should not envy, the faculties of colleges for availing themselves of the better fortune presenting. We need not consider a man dishonest because he is a stockholder in a railroad that charges three cents a mile; but, although we respect the man, it is none the less sound policy to secure legislation which shall reduce the milage rate. So, in the case of medical faculties, it is useless to criticize or to intimate that the members occupy their positions through pull, or to draw comparisons with political rings. The men themselves are usually worthy of respect and even admiration. Human nature simply is not enough altruistic for any medical faculty to close their institution and disband because they see the profession oversupplied with incompetent competitors.

The only logical and manly course for the profession to adopt, is to endeavor to

secure proper legislation which shall serve to limit the total graduating list, and thus to throw the brunt of competition upon the college faculties. The whole problem would then soon be satisfactorily settled by the survival of the fittest and the destruction of the weaker and inefficiently equipped colleges. Such a course, moreover, could not be openly combatted save by the avowal of selfish motives and of a disposition to debase the standards of the profession, while it would receive, even now, the cordial support of all the better class of medical colleges.

Fortunately, the issue is not merely an economic one. The medical profession is overcrowded but not with good physicians. Of the raw recruits who are pushing their way to the front, a relatively small proportion are qualified for the service. The solution of the problem does not necessitate the exclusion of a single worthy man; it does not demand the establishment of an unreasonably high scale of qualification; it requires merely that the coming physician shall have a passable education. The issue is one on which depends, not only the welfare of the medical profession, but to a high degree the health and chances of longevity of the entire population. If the issue can once be fairly comprehended by the physicians of the country and fully presented to the laity, the solution ought to be an easy matter.

ABSTRACTS.

THE SURGERY OF HYPERTROPHIED PROSTATE.*

THOMAS EAGLESON GORDON, M.B., B.Ch., Univ. Dubl.

The subject I have chosen for my address is the Surgery of Hypertrophied Prostate. It will, however, be convenient in the first instance, to briefly review what is known of the development, anatomy and function of the normal gland as far, at least, as these are of surgical interest or importance.

If the abdomen of an early embryo is opened there will be seen, on either side of the middle line, in the lumbar region, two long vascular prominences. These are the Wolffian bodies-structures composed of glomeruli and tubes similar to those found in the permanent kidney.

Leading from the Wolffian bodies there will be seen the Wolffian ducts and these pass downwards to open into the urogenital sinus.

This sinus is merely the lower portion of the spindle of the allantois; the upper part of the spindle, it will be remembered, forms the urinary bladder.

Lying internal to the Wolffian body is another structure, the genital organ; and coursing downwards, alongside the Wolffian duct, is the duct of Müller, which opens like it into the urogenital sinus. The lower part of the duct becomes fused with its fellow to form a single tube. The upper end is open into the peritoneal cavity.

These structures—Wolffian body and duct, genital organ, and duct of Müller—are the rudiments of nearly all the future genital system of both sexes. In the male, the testis is developed from the genital organ; from the Wolffian body and its duct are derived the vasa efferentia tube of the epididymis and vas deferens.

The urogenital sinus becomes the first portion of the urethra. The ducts of Müller undergo atrophy almost to annihilation. But their upper part persists as the hydatid of the epididymis, and the extreme lower united parts are represented in the uterus masculinus or prostatic vesicle. Very different is the fate of

*The Presidential Address to the University Biological Association, Dublin, 1894.

the duct of Müller in the female. Here the upper part remains as the Fallopian tube, and the remainder, the united part, forms the uterus and vagina.

It will thus be seen that the uterus masculinus must be the homologue of the uterus and vagina, or of some parts of them. It seems to be the opinion of the best modern embryologists that it is most probably the homologue of the vagina alone.

The development of the prostate itself has been lately specially worked out by Griffiths of Cambridge. The conclusions he arrives at are these—The tubules are derived from the prostatic sinuses on either side of the verumontanum—*i.e*, from that portion of the urethra which, as we have seen, is formed from the urogenital sinus.

As the tubes extend backwards they carry with them a prolongation of the external circular fibres of this part of the urethra, and this muscular tissue is seen in the fœtus spread out in slender fasciculi investing the developing tubes.

As the gland grows, it extends outwards and forwards, but the glandular part, as a rule, does not fuse in the middle line, the continuity of structure being effected by muscular tissue only.

The prostate, it will then be seen, has no developmental connection with the ducts of Müller. The uterus masculinus is no part of the prostate, but merely becomes imbedded in it in its lateral and forward growth. The prostate is not the homologue of the uterus, and we have seen that even the uterus masculinus is probably the homologue, not of the uterus but of the vagina only.

I need occupy only a very few minutes in describing the adult gland, particularly as I have some lantern slides to show, which, with Professor Cunningham's kind permission, I have been enabled to obtain from his frozen sections of the pelvis.

The prostate is composed of gland and unstriped muscle, the latter forming nearly three-fourths of the whole. The glandular part is made up of branching tubes, ending in tubular alveoli lined with columnar epithelial cells.

The average weight of the normal gland is about six drachms. It measures in its long axis, which is nearly vertical, about one and a-quarter inches, and it is about one and a-half inches in width. In form the prostate is roughly conical, and is usually described as having three lobes. The existence of the middle lobe has been questioned, but Griffiths has shown that it certainly does exist in a considerable number of cases. The base of the prostate rests against the bladder, about the internal urethral orifice. The term neck, as applied to this region of the bladder, is objectionable, as no constriction occurs about the urethral opening such as this term would seem to imply. The urethra traverses the gland at about its centre, and I would remind you that this portion of the urethra is almost vertical in direction. In front the prostate is separated from the lower part of the symphysis by a distance of about three-quarters of an inch, and behind is in close relation with the second part of the rectum. It is placed at a much higher level in the pelvis than is, I think, usually appreciated, its base being opposite some point on the upper half of the symphysis.

The gland is firmly fixed in position by the fascial connections of its capsule, so that it only sinks to a slight extent when the bladder is distended. If it is desirable to overcome the slight fall, for operative purposes, it can be prevented by a moderate distension of the rectum. The presence of this fixed support about the orifice of the urethra will easily explain the occurrence of a post-prostatic pouch when there is any cause of obstruction to the urinary outflow. In prostatic cases it will, of course, attain its greatest degree, because the sinking of the bladder behind the urethral orifice will be accompanied by a raising of the orifice itself, depending on the upward direction of the enlargement.

Within the capsule is the prostatic venous plexus. These veins become dilated and varicose in old age, and their valves disappear. Immediately beneath the mucous membrane of the urethra there is another smaller plexus which undergoes similar changes. These veins communicate freely with the hemorrhoidal and other veins in the neighborhood, and this fact, taken in conjunction with the absence of valves, explains the frequent congestions of the prostate—congestion which is sometimes sufficient to cause complete retention. The varicose submucous plexus is of interest as explaining the occasional occurrence of severe hemorrhage after the passage of instruments in these cases.

Although surrounded in this way by venous plexuses, the blood-supply of the prostate itself is remarkably small, and unless the venous plexuses are encroached on, large portions may be removed without causing severe hemorrhage.

The most important point to be determined in connection with the function of the prostate is whether it is or is not essentially a sexual organ. The solution of this problem has been arrived at by observations of prostatic changes in certain of the lower animals, which have distinct periods of sexual rest and sexual activity.

These observations were first made by John Hunter many years ago. He writes as follows:—"In the mole the prostate gland in winter is hardly discernible, but in the spring becomes very large and filled with mucus." This fact was confirmed by Sir R. Owen, and during the last few years by Griffiths. Griffiths' observations are of particular interest, since they include microscopic examinations. I need not delay to describe them in detail. Suffice it to say, that they fully confirm John Hunter's early observations—that they show that the prostate undergoes an enormous increase in size during the breeding season, and that this increase is accompanied by important changes in the shape and number of the epithelial cells lining the gland tubes, and by equally marked changes in the muscular stroma. These interesting facts, I think, conclusively show that the functional activity of the prostate in these animals is closely dependent on the functional activity of the testes, and this relationship would seem to justify us in regarding the prostate as an accessory sexual gland.

This conclusion has received confirmation from the effects on the prostate which have been observed to follow castration in many animals. In Hunter's works the following statements occur:—"The prostate and Cowper's glands, and those of the urethra in the perfect male, are soft and bulky, and the secretion salt to the taste. In the castrated animal these are small, flabby, tough, and ligamentous, and have little secretion. Especially marked is this change when the animal is castrated when young." These observations have received striking confirmation by Griffiths and White, and it has now been absolutely proved that the prostate will undergo atrophy whether the animals are castrated when young or when they have attained to adult age. The experiments conducted for White are particularly interesting.

The average weight of the prostate was first determined by experiments on 35 dogs. Taking the average weight in dogs weighing 14 to 16 kilos. as 15 grammes—in one case, 17 days after castration, the prostate was found to weigh only 5½ grammes instead of 15. In another dog, in which the average weight of prostate relative to its weight was 19 grammes, it weighed only 2½ grammes about a month after castration. There were, in all, twenty-four experiments performed, and in every case the results were equally remarkable. Microscopic examinations were made in each, and showed atrophy of both glandular and muscular elements.

The prostate is then undoubtedly a sexual organ, and recent experiments tend to show that it is not only accessory but essential to fertilization. This fact has been proved by experimental removal of the prostate. In the animals so treated the power of copulation remained, but they were incapable of reproduction of their species. Such being the case in the lower animals, one might, with tolerable safety, conclude that the prostate has a like function in man, and that castration would lead to either nondevelopment or atrophy. The direct evidence is, unfortunately, very unsatisfactory, and is almost confined to the case of a few eunuchs. We must, then, speak with caution, but as far as these imperfect observations go they confirm the results which we would in the first instance have anticipated.

I think it would be very unsafe to dogmatise concerning the exact part which the prostatic secretion takes in fertilization.

Föroringer is of the opinion that its function is to awaken the latent vitality of the spermatozoa. He found by actual experiment that the addition of prostatic fluid to testicular secretion caused movements in spermatozoa previously quiescent.

It remains to consider the relation of the prostate to micturition. This long-vexed question concerning the sphincter of the bladder can scarcely be said to be definitely set at rest. The true voluntary sphincter of the bladder is probably situated near the apex of the prostate, and

consists of a circular band of tranversely striated muscle, named after its discoverer, the external sphincter of Henle. The portion of the urethra above this may, perhaps, almost be looked upon as part of the bladder, but unless there is considerable urinary tension it is kept closed by the elastic pressure of the prostate which surrounds it.

Leaving this necessarily somewhat lengthy introductory matter, I will proceed to the discussion of the more purely surgical part of the subject.

The enlargement which I have now to speak of is almost certainly a glandular hypertrophy. The fibrous form may be regarded as merely a later atrophic stage. Of the cause of this enlargement absolutely nothing is known. We cannot even state with certainty its time relation to the cessation of sexual function, for, although the testes may become inactive at fifty, it is undoubtedly true that they may continue active until seventy or later. A discussion of the numerous theories would be mere waste of time, but I cannot resist a short reference to one, that of Mr. Reginald Harrison. He endeavors to prove that the enlargement is a compensatory change formed to oppose a sinking of the bladder behind the prostate, which he says, tends to occur in old age.

To support such an extraordinary, so improbable, a theory, one would expect to find very convincing proofs that this sinking of the bladder does occur—such proofs are not forthcoming. Further, the enlargement is not fibrous, nor even muscular, but, as I have said, almost certainly glandular; and even Mr. Harrison will hardly think it possible that a gland should increase in size in order to support some superimposed structure.

Again, in certain of the lower animals—*e. g.*, dogs—this enlargement occurs, and in them the axis of urinary pressure is entirely different. The only difficulty which Mr. Harrison himself recognizes is the occurrence of those masses which sometimes grow up into the bladder. This he explains by the following amazing statement:—"I would speak of these as the upheavals of a frequently contracting muscular ring." My respect for Mr. Harrison as a distinguished surgeon will prevent me expressing what I think of this volcanic utterance. It is surely a *reductio ad absurdum*, and I would have made no reference to the theory were it not an excellent example of the dangers attending speculation on so obscure a subject.

Before discussing the operations proposed for the relief of prostatic hypertrophy, it is scarcely necessary to make the statement that a very large majority of all such cases require no treatment other than properly conducted catheterism, and such a regulation of the general mode of life of the patient as may be best suited to his condition. Setting aside these cases there remains a minority in whom these simple methods are no longer sufficient. I will briefly consider what indications we have that such a stage has been arrived at. First in importance is frequency of micturition. The principal causes of such frequency are an increasing proportion of residual urine, cystitis from whatever cause, and, thirdly contracted bladder. This latter condition, though apparently uncommon, is one of great importance, since it may be regarded as a certain indication for operative interference. A patient in this condition, as Sir H. Thompson puts it, lives for little else than to pass his catheter, and has arrived at a stage that is the almost certain prelude of approaching death.

In addition to extreme frequency and conditions, such as cystitis, specially associated with it, I wish to remind you of certain other indications of the approaching end to catheter life. One is increasing difficulty in the passage of instruments due to the particular nature of the growth. Another is repeated hemorrhages. A third the presence of a calculus.

The occurrence of these signs may be regarded as the advent of a further stage in the life of the patient with prostatic hypertrophy. The further course, if untreated, is one of continuous decline. It is marked by signs of general deterioration—such as progressive emaciation, loss of appetite, and thirst with dry and coated tongue; and at times by graver symptoms as a remitting fever or recurring rigors. These, when combined with signs of local deterioration—increasing frequency, increasing proportion of residual urine, and at times, it may be absolute retention—complete a picture only too familiar and point with certainty to the coming of the death.

That this sequence of events may be expected when the signs we have mentioned become manifest, has long been recognized by surgeons; and it will be convenient to briefly consider, first, what have been considered the limits of surgery in these cases up to recent times, as this will enable us to better estimate the degree of progress that has since been made.

It is only during the last few years that, for this further stage, any operation has been undertaken of a radical nature. It is indeed true that every now and then operators, who either held a great reputation or wished to obtain such, proposed and practised cutting operations on the prostate, but none of these received universal sanction and they do not even receive mention in standard text books of surgery. The palliative measure most deserving of attention is perineal drainage. This operation was brought prominently before the profession by Sir H. Thompson some ten years ago, and, needless to say, is based on sound surgical principles. By getting rid of the necessity for frequent catheterism, it furnishes rest for the patient, and by affording excellent drainage in *most* cases it gives rest to the bladder and urethra and does much for the relief or cure of cystitis.

But while fully recognizing the excellent results obtained in many cases, we cannot overlook certain limitations to its usefulness.

1. It is unlikely to afford sufficient drainage if there is much post-prostatic pouching of the bladder.

2. If the prostatic urethra is much lengthened it cannot allow of digital exploration of the bladder—a calculus might in these cases easily be overlooked.

3. If catheterism has been difficult on account of the form which the enlargement has taken, this difficulty cannot but again present itself when the perineal wound has closed.

That there are such limitations is, of course, fully recognized by Thompson, and he has recommended another operation as a substitute for it or as a sequel to it. This operation is suprapubic cystotomy for exploration purposes, and the subsequent maintenance of a permanent opening, in which is fixed a shielded silver catheter. Sir H. Thompson gives some details of a case thus operated on as a proof of its success.

This was "an advanced case of constant and painful catheterism." A suprapubic exploration was carried out in 1886, "and dense fibrinous deposit and much adhering phosphatic grit were successfully removed," and the patient was able to walk abroad in about a month. Now mark his condition: he was able to walk three or four miles a day, was free from pain, and his general health was on the whole good, but he had constantly to wear his silver cannula, and supplemented his own faulty anatomy with the ordinary urinal worn by persons requiring such a convenience. Instead of the simple method of relief which normally precedes sleep, this unfortunate man had to wash out a large part of his urinary tract. First, he removed and washed his cannula, then, I suppose, he cleaned out his rubber bag, and, lastly, the relics of his bladder.

Now I have no doubt this man's condition was much improved, but, I think, he surely had no elysium here on earth, and would welcome the time when he would be called upon to shuffle off this mortal coil and his artificial bladder for ever.

I have endeavored to state, as clearly and briefly as I could, the most which a surgeon can expect to do for these advanced prostatics if he keeps to the beaten tracks of what I will call orthodox surgery; and I will now lay before you the newer operations performed and the results achieved by men, some of whom I am pleased to look upon as pioneers of nineteenth century surgery.

First amongst such operations I will place suprapubic prostatectomy. For the introduction of this operation surgery is certainly indebted to M'Gill, of Leeds; for, although isolated instances of its performance occurred from time to time, it never received any serious consideration until its claims were urged by M'Gill in his Leeds Address before the Medical Association in 1889.

It would be beside my purpose to here discuss the technique of the operation. Suffice it to say, that an opening is made above the pubes. The interior of the bladder is carefully examined and the growth removed. The object in all cases is, first, to remove any protruding intravesical growth, and, secondly, to provide a low-level urethra which will be capable of draining a post-prostatic pouch. The

first portion of the urethra should be digitally examined, and if it is necessary to extend the operation to this region it is considered well to add to the supra-pubic opening another in the perineum to drain this portion of the urethra.

This account, though brief and imperfect, will, I think, sufficiently show that this supra-pubic prostatectomy is an operation of the greatest possible gravity. It matters little what published statistics show; common sense, which is often a better guide than statistics, will clearly show to any man possessed of it, that this is an operation attended with the greatest possible risks to life, especially in the case of such patients as these. Granting this, it is evident that to justify its performance its advocates must show us results better than can be obtained by other safer means. Particularly they must show—

1. That the obstruction will not recur in even a large minority of cases.

2. That the function of micturition will be restored in a fair proportion of cases.

3. Or, failing this, that the patient will be once more able to resume his catheter life with far greater comfort and success than previously.

As regards recurrence, it is satisfactory to find only one instance of it in ninety-four cases recorded by Maunsell Moullin; and any opportunities which have arisen of subsequent examination have confirmed clinical results.

Concerning the restoration of micturition by this or other forms of prostatectomy, Sir H. Thompson makes the following statement in his Clinical Lectures in 1888, not since, as far as I know, contradicted: —"I have long wished to see this sight, and have travelled considerable distances abroad and elsewhere expressly seeking it, but at present without success."

Now, it requires most convincing, overwhelming evidence to overthrow this opinion stated by the greatest living master of urinary surgery. I believe such evidence is forthcoming. I cannot discuss the matter at length, but I would instance particularly several of M'Gill's cases published since Thompson's lecture, a case recorded by Buxton Browne, and again, at all events, one of Mayo Robson's twelve cases.

But apart from this very severe test, the restoration of the function of micturition, this operation of supra-pubic prostatectomy has shown such excellent results as to justify its holding a definite place in surgery. I think we should, however, insist that as an operation it must be confined to a very limited class of cases—to men who are no longer able to live with the aid of catheterism alone, but who still possess sufficient strength to undergo a major operation, an operation likely to be attended with severe shock, and, it may be, considerable loss of blood. For the remainder—the far advanced cases—there is, I believe, at present one chance, and one only, and that a perineal section.

I have not thought it necessary to consider other procedures which are, for the most part, only modifications of perineal section; but quite recently an entirely novel operation has been proposed which I must now refer to. The operation cannot at present be said to hold any definite position in surgery; but the very fact of its being on its trial will, I hope, give it the greater degree of interest. This operation is double castration.

I will lay before you the arguments which have been held by some to justify its experimental performance:

1. The prostrate is a sexual gland, the homologue of the uterus.

2. The uterus undergoes atrophy at the menopause, whether occurring naturally or induced by öophorectomy.

The conclusion drawn is, that the prostate would undergo atrophy if the testes were removed.

This argument is somewhat weakened by the fact that the prostate is not, as we have seen, the homologue of the uterus; but, nevertheless, we are justified in thinking that the prostate, a sexual gland, will atrophy with the whole generative system on removal of the master organs, the testicles, just as the whole female generative system atrophies when the ovaries cease to functionate.

To obtain additional light, experiments have been carried out on the lower animals, and these, you will remember, conclusively prove that the normal prostate atrophies after castration in them. This would lead us to expect a similar change in man. But, as I have said, the evidence is not very convincing, and applies almost entirely to eunuchs; and it is manifestly a very different matter that growth should

be arrested than that a fully-developed gland should atrophy. However, quite apart from this evidence, it seems to me exceedingly likely that the normal prostate would atrophy in men if the testes were removed, for it does so in dogs, and there is no reason to suppose its functional position, with regard to the sexual apparatus, different in them to what it is in us.

Granting in this, we are still far from having solved the problem before us; for, although a normal prostate atrophies, it does not necessarily follow that a morbid one will do so. Nor do we know enough about the hypertrophied prostate to say that this is even likely. If we could say that the enlarged prostate was the result of excessive sexual activity the case would be very different; but I am convinced that there is no proof of any kind that such a causal relationship exists. Buxton Browne says he is "more and more struck by the fact that prostatic hypertrophy often follows a second marriage or a marriage contracted early in life." This vague statement is quite worthless. Besides we must bear in mind the important fact, that the hypertrophy occurs, not during the period of greatest sexual activity, but when that function is on the wane.

I would have considered that the argument in favour of castration were not such as to justify its application to men. I would have thought the proper course to pursue would have been to have obtained animals whose prostates had undergone hypertrophy — doubtless, a matter of difficulty—to have castrated them, and, if the results were satisfactory, I would have considered the experiment on man justifiable. Fortunately for surgery, others with better right to an opinion have not considered this intermediate step, with its accompanying delay, necessary; and now the operation has been performed quite a considerable number of times.

The operation was first performed by Ramm, of Christiania, in April, 1893. Since then by Haynes, Professor White, Fremont Smith, and Maunsell Moullin. The results are very satisfactory.

I need only refer in any detail to one case, and I will select the last which I have read of—an operation performed by Maunsell Moullin, in June last, and reported in the *British Medical Journal* of November 3. The patient was eighty-one years old. He had complete retention, due to an enormously enlarged prostate, as felt per rectum. No catheter could be passed, so the bladder was aspirated above the pubes. After this the necessity for some permanent operative relief became urgent, as the man could not sufficiently relieve himself, and he was losing ground. Supra-pubic prostatectomy was out of the question, so the choice only lay between a perineal drainage or castration. Moullin decided on attempting the latter, and performed the operation with the following results: —In ten days the prostate was smaller, and after three weeks all that could be felt per rectum was a fusiform thickening extending along the catheter, so small and soft that the shaft could be felt everywhere through it. An ordinary catheter could be passed with ease.

This result is truly wonderful; and all the other operations performed up to the present appear to have been nearly equally successful.

We may, then, safely conclude that castration can cause an atrophy of a hypertrophied prostate; and, further, that perhaps one would be justified in performing the operation in certain advanced cases as a substitute for perineal drainage. We must remember, however, that, as an operation, it is still in the experimental stage.

This operation of castration brings us to the furthest limit of advance in this branch of surgery, and I will, in a few words, state the conclusions which can, I believe, fairly be drawn from a general review of the subject:

1. Now, as formerly, the large majority of cases require no treatment except regular catheterism.

2. For some, however, this is insufficient, and we may then resort to supra-pubic prostatectomy if the patient seems to have sufficient strength.

3. For the very old and feeble there is at present only one operation recognized by surgery—*i.e.*, perineal drainage.

4. But now it seems possible that we may have in double castration an alternative measure. The results already obtained make us hopeful; but I think at present Irish surgery can afford to wait. —*Doublin Jour. of Med. Sci.*

Insect Bites.

Ammonia water	45 minims.
Collodion	15 minims.
Salicylic acid	1½ gr.

S.—One drop to be applied to each spot affected.

SOME THOUGHTS ON THE METHOD OF RELIEVING AN OBSTRUCTED BOWEL.*

W. THORNLEY STOKER, PRESIDENT R. C. S. I.

It is the privilege of the President of this Section to address the members at its opening meeting on some matter of surgical interest, and it is an occasion when one may fairly be excused if he elects a topic to which he can apply his experience rather than one of the novel and obscure subjects in which the theorist delights to revel, and which capture the intellect rather than deal with every-day incidents of our surgical life.

I do not intend to go far afield for material, because it seems to me that the importance of facts is to be measured by their commonness, and that just as the dignity of labor overshadows the greatness of kings, so the most frequent incidents of our surgical life throw the curiosities and rarities of our science into the shade. Common surgery means universal surgery, and implies that which may be cultivated to the greatest good of the greatest number. What Tennyson has called "the falsehood of extremes" is one that creeps very insidiously into the daily life of the enterprising surgeon. There is a tendency to argue from extreme or rare and individual cases, and to lose sight of broad and collective issues. How often we see elaborate and able papers written with a view to deduce a theory or a practice from a particular and eccentric instance, and the paucity of material concealed by an overshadowing cloud of science condensed from the literature of half a dozen modern languages. This "paper-making" or encyclopædic style is destructive to a fine cultivation of our science, but it is a less evil than that which it conceals—the undue craving after originality. Every second surgeon wants his name connected with an operation or an instrument, and in this age of hot and unwholesome competition the hunger is disastrous to the quiet and perfect digestion of abundant material which waits on normal appetite.

As far as my sight reaches I can see no direction in which the craving for novelty and originality has caused men to overstep themselves more than in the operations undertaken so often and with such a light heart for the relief of some forms of obstruction of the bowel. The hateful expression that "there is practically no danger in opening the peritoneum" is ever before the reader in these days, and, as regards a class of cases I wish to speak of, a more false or poisonous teaching was never promulgated.

It is more than five years since I read before this Section of the Academy a paper "On the Treatment of Acute Intestinal Obstruction due to Collections within the Lumen of the Bowel," and I am here now to repeat with every force I can, and with what added weight time, experience, and the position I now hold, may give to my words, the doctrines I then enunciated.

Do not let anyone misunderstand me—although I hold that we live in a time when there is too free a resort to operation in general, and although we may look for a subsidence of the wave and a return to a normal level—yet I have no cry to raise against the general advance of the operative treatment of the bowel—that would be foolish as well as futile. I have no word to say now against laparotomy in any class of cases save one, and even in that class I make no wholesale condemnation, but only urge that it shall be adopted after grave consideration and in selected instances. My remarks do not apply to obstruction due to neoplasms growing in the substance of the bowel, or to pressure on it by peritoneal or intraperitoneal material; but to those very common cases in which, owing either to an atonic intestine failing in its peristalsis, or a normally strong one becoming overloaded by its contents, the balance between the propulsive power of the bowel and the load it has to move is destroyed. The result is the decreasing power of the gut, its extreme distension, and the production of the condition named *ileus*

*The Presidential Address delivered at the opening of the Surgical Section of the Royal Academy of Medicine in Ireland, Session 1894-95.—The Dublin Journal of Medical Science, February, 1895.

paralyticus. We seldom see these cases until they have arrived at an advanced stage, until great addominal distension has taken place, and until the issue is very evidently one of much gravity.

I have seen a great number of such cases in my own practice and in that of others, and I wish to reiterate the opinion I have already expressed that laparotomy is in them an extremely fatal operation, and should be undertaken only when other legitimate means have been exhausted, or where they are evidently improper owing to the advanced stage or general condition of the case. To formulate rules as to when or in what condition such an operation might be undertaken is not possible except to the book-surgeon. The man who has practical experience knows that abdominal surgery cannot be reduced to a formula, and it is long experience and the tact which may be cultivated, but cannot be conferred, that teach us when we must and may open the abdomen in *ileus paralyticus*. To be sure, even the most skilled may fall into the error of delay, and there is no case so surrounded by doubtful problems as that of which I am speaking.

As regards antecedent treatment I have not much to add to, and nothing to subtract from, what I have already urged in the paper I have quoted.

Of the ordinary local measures, such as the application of heat and rubefacients, I have a growing dread. I have never seen them doing substantial service, and I have repeatedly witnessed their production of such superficial redness and inflammation as served to obscure diagnosis and increase the dangers of operation. If poultices or massage be employed they should be used in such a degree as to soothe or stimulate, but not to produce irritation.

Of the value of belladonna, if used freely and early in the case, I still hold a favorable opinion, and I am convinced that its best therapeutic effect is obtained by administering it if possible uncombined with opium. I have nothing to take from, or add to, the ideas I have already expressed about this drug. Its action is understood, and its administration logical. It relieves pain, while it does its work. It finds its chief use in those cases of peristaltic paralysis due to tympanites or fæcal accumulation, and as these are most often seen in obese persons, and are attended by great meteorism—both conditions which render operation extremely dangerous—this drug is often an alternative with the knife. It should be given in full and repeated doses, and pressed until it shows its constitutional effect by producing either dilated pupil or dryness of the throat. The latter symptom is that most usually seen. It is perfectly useless employing this drug unless it be administered to its full extent. It may generally be combined with calomel. It is remarkable that whereas the tolerance of belladonna when given in chronic obstruction is very variable and its employment requires caution, it is extremely well borne in acute cases. The weak and impeded heart which is present in so many examples of acute obstruction is materially aided by the use of belladonna, which is a most excellent cardiac stimulant.

Of opium itself I still have a respectful terror; it masks symptoms so much that it is capable of being a very destructive agent. Nothing but severe pain indicates its use, and in view of the vomiting which is generally present, it is best employed in the form of morphine, and best administered by the hypodermic method.

Of the early employment of purgatives I am even less afraid than formerly, but I have somewhat modified my opinion as to the best drug to use. While I have not relinquished calomel, I rarely employ it except in combination with belladonna. I have a growing fondness for salines. I generally use the sulphate of sodium, and give it in hourly doses of one or two drams until an ounce or more has been administered. The worst that can result from the use of a cathartic that fails to purge is disturbance of the stomach, and this unhappily is such a usual incident of these cases that it is of less moment than it otherwise would be. The difficulty of giving a purgative is often very great on account of the vomiting which exists, and in such cases their administration by the rectum is occasionally successful. Before using a purgative in this way the rectum should always be washed out with warm water. The greatest therapeutic *desideratum* of our day is a method of catharsis by hypodermic medication; and whoever can discover a purgative capable of this mode of introduction will have done as much for humanity as Jenner or Simpson.

Nothing is more perplexing than the problem of how to purge a patient whose stomach rejects everything that is introduced into it.

Of all the points in the treatment of an overloaded or paralyzed bowel there is none on which my convictions remain stronger, or in which, pleasant to relate, I have seen more improvement in method than in the use of the long enema tube. I have spoken in no uncertain fashion of the uselessness and danger of that instrument called "O'Beirne's tube," all the more awful because it was—and, I fear, still is—the custom to teach that it is safe, and its employment so free from danger that even unskilled persons may use it. Mr. Treves was, perhaps, the first writer to cast discredit on this hoary impostor. It is not enough to recognize its danger unless we also admit its comparative uselessness. Life may be destroyed by it. It is rigid enough to perforate the bowel; and I know cases in which this result has, by a little untrained energy, been achieved. I will undertake to perforate the coats of any average rectum with an ordinary gum elastic long tube, such as is usually supplied by instrument makers; and what can be done may be done, if either enough will or sufficient ignorance be present. So much for its danger; what of its uselessness? I contend that no mechanical effect can be gained by the introduction of fluid into the bowel which is not possible with an instrument 9 or 10 inches long, assisted by the natural penetrating quality of water, by gravitation produced by the posture of the patient, and such gentle pressure as that afforded by the use of a tube to which I shall presently refer. The absurdity of supposing that a pipe can be passed through the sigmoid flexure must be evident to those acquainted with the anatomy of that bowel; and the obvious explanation of the instances where, on external examination, it seems to have been done, can be a difficulty only to the tryo in the dissecting-room or dead-house. The length of mesentery possessed by the sigmoid bowel will often permit it to be pushed into the upper zone of the abdomen by the intrusive instrument. Nor must we overlook the danger of the force with which an injection can be introduced by the powerful pump usually employed with the long tube. I have seen a bowel which had been ruptured with fatal effect by this agency alone. As regards the use of medicaments other than water, and supposed to be solvent—such as oil or ox-gall—I disbelieve in their efficacy. They have no effect except whatever moral one they may exercise on the patient or his friends. All that can be done, can be best done by warm water alone.

For some years past I have used but two instruments for giving enemas. One is an ordinary Higginson's syringe, to the nozzle of which a No. 12 or 14 red rubber catheter has been attached. For the daily purposes of the rectal toilet, or in cases where the injection is to be retained, or ejected by natural effort, this will be found perfect. It is absolutely safe, and quite painless. It can be used in the most tender infant or the most callous adult; and in instances where injection is called for in the presence of inflamed piles, it is a blessing without any disguise.

The second instrument is an ordinary red rubber tube ⅜ to ½ of an inch in diameter, such as is used for washing out the stomach. It is convenient to have circles marked at 3, 6 and 9 inches from its extremity, so as to know what length of it lies in the rectum. A large funnel should fit the dilated extremity and should be transparent, so as to allow the fluid, which is being introduced, to be seen.

The patient lies on his back or left side with the pelvis raised, so as to facilitate the passage of fluid into the sigmoid and descending colon. The only fluid that should be used is warm water, and 8 or 10 gallons of it may be employed at one sitting. The surgeon sits on the right of the patient's bed, introduces the end of the tube, and retains it in position with his left hand, while with his right he holds the other end of the tube, into which the funnel is inserted. The tube is introduced 3, 6 or 9 inches, as may be indicated, and should be occasionally moved up and down in the anus by the left hand. An assistant pours water in the funnel, and the pressure may be varied and adjusted by the height to which it is raised by the operator. The left hand can be used at any moment, when the pressure in the rectum becomes painful, to pinch the tube, and stop the flow. When as much water has been introduced as can be borne, the funnel is removed,

that end of the tube lowered to a basin placed on the floor, and the fluid allowed to run out of the bowel. By repeated operations of this kind large quantities of water may be used, and the bowel emptied without the patient being exhausted by straining or by the necessity of changing his position. The solution of fæces and expulsion of flatus are assisted by the pushing in and out of the tube which I have indicated, and by the varying hydrostatic pressure, caused by alternately raising and lowering the funnel at the free end of the tube.

The advantages of this method over older ones are as follows:

1. The tube is soft and cannot cause injury.
2. The fluid pressure can be regulated to a nicety, and cannot be made excessive; as if undue pressure threatens, regurgitation into the funnel takes place.
3. Enormous quantities of water can be used.
4. The currents created by altering hydrostatic pressure have a powerful solvent effect on the fæces.
5. The operation necessitates no exertion on the part of the patient, no change of position, and can be carried on for a long time without causing exhaustion.

I trust I may be excused for entering into a detail of this kind in the presence of so many accomplished surgeons; but there are many young ears present into which my words may pass. I cannot but regard this apparently simple procedure as one of the greatest improvements which has been introduced into the treatment of bowel obstructions. I have avoided many laparotomies by employing it, and I believe have seen a number of lives saved. Like all other surgical practices, it gains value by experience; but I am convinced that those who patiently employ it will esteem it as highly as I do; and I earnestly urge on my younger colleagues the abandonment of the old rigid tube and the adoption of the simple rectal armament included in the two instruments I have spoken of.

It is not alone in cases of fæcal obstruction that this method finds its use. In every instance where it is sought to unload the bowel it will be found of service. It may be used with excellent effect in the paralysis of peritonitis, and will, in that difficult case, produce evacuation where other means have failed.

There is no organ of the body which requires more tender treatment than the bowel, and none which is so often left to be dealt with by the unskilled or uneducated. Many surgeons delegate the use of the enema to an assistant, as if this potent engine were unworthy of their own attention, and many who use it employ undue force. "No force" should be the postulate of our work with the intestine. We cannot be too persuasive, and it is because so much bad practice with regard to the use of the enema is followed, that I have ventured on such an occasion as this to urge my views against the use of a rigid tube, and to plead for one which has both complete safety and infinite advantage in point of merit. I offer you no weary list of cases, because, after all, they are useful only to substantiate opinion, and if you cannot accept a man's deliberate opinion you are not likely to put faith in his cases. Cases can be twisted to prove anything. In such a position as that which, by the kindness of the Fellows of this College, I occupy, a little dogmatism may be excused, and I feel so strongly about this matter of the tube that I have ventured to deal with it in preference to some more brilliant or alluring topic. I beg you to believe that if I speak forcibly it is because I feel conviction, and when I argue for the total abandonment of the older form of tube I desire to assure you that any words I use are spoken with a full recollection of the gravity which my office attaches to them.

Of course the great difficulty to be overcome in acute obstruction is that of diagnosis, and even to the most experienced no finality is possible. There is no branch of surgery in which extended clinical observation and careful reasoning work better together. A simple process of logic will help the most trained clinician to a true conclusion. No cases afford more opportunity for the display of high surgical qualities than those of which I have spoken. Given the proper faculties of observation and deduction, the two qualities which combine to produce great surgical fitness are Thoroughness and Resource, and in the management of obstruction of the bowel there is the most ample opportunity for their development.

THE LIBRARY TABLE.

BOOK REVIEWS.

OBSTETRIC SURGERY. By Egbert H. Grandin, M.D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the French Hospital, etc.; and George W. Jarman, M.D., Obstetric Surgeon to New York Maternity Hospital, Gynecologist to the Cancer Hospital, etc.; with Eighty-five (85) Illustrations in the Text and Fifteen full-page Photographic Plates. Royal Octavo, 220 Pages. Extra Cloth, $2.50, net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

AND

KLINIK DER GEBURTSHULFLICHEN OPERATIONEN, von Heinrich Fritsch, Professor der Geburtshulfe und Gynakologie, Director der Koniglichen Universitats-Frauenklinik zu Bonn, 1894.

Here are two valuable volumes; the first the joint work of two doctors whose names are well-known to the American profession, the other the single work of one of the best of German teachers; each volume devoted to the same subject.

Swift said, "The most accomplished way of using books at present, is two-fold; either, first, to serve them as some men do lords, learn their titles exactly and then boast of their acquaintance; or, secondly, which is indeed the choicer, the profounder and the politer method, to get a thorough insight into the index, by which the whole book is governed and turned like fishes by the tail. For to enter the palace of learning by the great gate, requires an expense of time and form; therefore, men of much haste and little ceremony, are content to get in the back door." . . . "The physician discovers the state of the whole body, by consulting only what comes from behind. Thus men catch knowledge by throwing their wit on the posteriors of a book, as boys do sparrows with flinging salt upon their tails."

Without adopting the superficial method of using books, thus exposed by the satirical Dean, we have thought that a brief, though necessarily imperfect, comparison of these volumes would be useful. The American work has, including the index, 207 pages, and the German 307; the latter too, has rather a larger number of words on a page. The American work presents 84 illustrations, the German 91; the former has several full-page plates, but the German none. So far as the illustrations are concerned, in an artistic point of view the American volume is much the superior. And so far as relates to paper and printing, its superiority is very great.

Both Drs. Grandin and Jarman, and Professor Fritsch dwell at the outset upon asepsis and antisepsis. The former in their joint work lay down rules which we wish every obstetrician would read and remember; many a life would be saved were these rules observed. Here is a passage we must quote, though our space is limited: "If there is one thing more dangerous to the patient than another, it is the vaselin which it is customary to use as an emollient. The vaselin-pot should, once and for all, be banished from the lying-in chamber." Again they say, and we heartily endorse the statement "Creolin will answer as a lubricant for the finger and for the instruments, and this should be the only lubricant allowed in the lying-in room, unless the physician prefers to use sterilized oil." More than once they refer to a solution of creolin: scientific accuracy ought to characterize a scientific book—we have used creolin as an obstetric antiseptic for some years, but we have not seen a solution of it in water. Fritsch commends lysol, and we think from what we have seen, that in Germany it is displacing creolin.

Several pages in the American work are given to pelvic deformities, and in the German a greater number to the mechanism of labor.

In each work the questions as to the application of forceps are well presented. Fritsch refers only to the Nægele instrument, while the American authors mention instruments, especially different varieties of axis-traction forceps, also giving illustrations. Turning is well-presented in each book, only we miss the many illustrations given in the American; the German has not one.

Fritsch presents some subjects not mentioned by the other authors, *e.g.*, cervical hypertrophy, single and double monstrosities, injuries to child in extraction, inversion of uterus, resuscitation in apparent death of the child, etc. On the other hand, much more room is given to some subjects, *e.g.*, symphysiotomy, by the Americans than by the German.

Space does not permit continuing the comparison, and in conclusion we can heartily commend the volume of Grandin and Jarman to the American obstetrician. We might question, for example, the orthography of Beaudolocque, for the first *e* has no right in the name. We might point out also some very careless writing, *e.g.* "The nature of many of the antiseptic agents on which we must needs rely is poisonous to the human body." Would it not be better to say, Many of the antiseptic agents on which we must rely are poisonous? Why should a woman in beginning labor, not be so spoken of, instead of saying she, "is about to perform a physiolgical act? There are many similar faults in the book. But life is short, and the busy doctor, for whom the MEDICAL AND SURGICAL REPORTER especially exists, will not wait for them to be pointed out; he will buy the book, read it, and find in the reading and in its application much good.

P.

DISEASES OF THE EAR. A Text Book for Practitioners and Students of Medicine. By Edward Bradford Dench, Ph.B., M.D., Professor of Diseases of the Ear in the Bellevue Hospital Medical College. Octavo; 645 pages; 8 colored plates and 52 illustrations in the text. New York: D. Appleton & Co. 1894.

In 1891, Dr. B. St. John Roosa published his valuable practical treatise on the Diseases of the Ear, Seventh Edition. Then followed the able work of M'Naughton Jones, and Stewart, of London. In 1893, there was placed before the medical public the translation of the elaborate works of the two great masters in this department, Professors Politzer and Geuber. At the same time there was published in Germany the exhaustive work of Schwartze and Nebant-Schetsch. Now we have the works of Hovell, of London, and Dench, of New York. Mark T. Hovell's smaller book is instructive and practically useful from his long experience in diseases of the throat, nose and pharynx.

The present volume combines all the good points of the most recent works, as well as descriptions of the various manipulative procedures, for the benefit of those not familiar with the subject. In a careful reading of this work one is impressed with the numerous excellent illustrations; with the details of the writer's personal experience, and the care with which he has selected cases for operation. The neglect of this care has been the great cause for which operations on the middle ear have been decried.

In the brief space given for review one may only indicate the chief matters which attract attention. After 72 pages devoted to the anatomy and physiology of the ear, there are four colored plates and 18 wood-cuts, all *very* good. In Chapters III–IV, will be found Physical and Functional Examination. Chapters V–X are given to Diseases of the Auricle. Chapters XI–XVI to Diseases of the External Auditory Meatus, and Foreign Bodies in the Canal, including Exostoses, and Wounds and Injuries of the Membrana Tympani.

Chapters XVII–XXVI to Diseases of the Middle Ear. Instead of middle ear catarrh, the author used the term tubal catarrh, with synonyms of Anti-Salpingitis Eustachian Catarrh, borrowing a term from the gynecologists, but it has the same affection of the Eustachian tube which arises from acute coryza or naso-pharyngitis. Chapters XIX–XXVI to Acute Catarrhal Otitis Media and its complications. Now comes the most important and the best part of the book, the surgery of the Conducting Apparatus, which is most thorough and satisfactory in all the minutest details so necessary to the aural Surgeon. In the concluding chapters will be found Diseases of the Perceptive Mechanism, and Complicating Aural Affections. After a careful examination of the volume, we consider it not only the best work, but also the most practical text book in the English language. L. T.

INEBRITY OR NARCOMANIA. By Norman Kerr, M.D., F.L.S. Third edition, 8 vo., 780 pages. London. H. K. Lewis, publisher.

This book is not in any sense a religious work nor a fanatical sermon on drunkenness, but criticises from every scientific standpoint the misuse of all of the narcotics and of a large number of other drugs not usually placed in this class.

Anyone who has not made special investigation in this branch, will be surprised at the size of the list of drugs which are habitually used by individuals to produce stimulation, sleep, or a pleasant sensation of some sort.

The tendency to habitually use these drugs is regarded as a disease, and as such its etiology, pathology and treatment are discussed, and finally the part it plays in jurisprudence.

Having already reached its third edition this book has, of course, a recognized position, but besides being a very instructive medical work, this will prove a very interesting book for any student of human beings and of social conditions. S. M. W.

THE CARE AND FEEDING OF CHILDREN. A catechism for the use of Mothers and Children's nurses. By L. Emmett Holt, M.D., Professor of Diseases of Children in the N. Y. Polyclinic. Attending physician to the Babies' Hospital and the Nursery and Child's Hospital, New York. New York: D. Appleton & Co. 1894. Price, 50 cents.

This is a cloth-bound book of sixty-six pages, arranged in the form of question and answers, and originally intended for the instruction of nurses while in the training school. Some additions have been made, making it equally valuable to the trained nurse, the mother and, indeed, to the average general practitioner. The information is tersely expressed, and the teaching it offers is quite in harmony with the advanced notions of the specialist in children's diseases.

W. H. P.

THE PHYSICIAN'S VISITING LIST for 1895. Forty-fourth year of its publication. P. Blakiston & Co., 1012 Walnut St.

This visiting list—a familiar and valuable friend—comes before us again for 1895, being the forty-fourth year of its publication, which alone proves it has found sufficient favor with physicians. The same general arrangement has been maintained, and the fly-leaves contain many useful tables and data, which often serve one well in emergencies. W. H. P.

Neuralgia.

Dr. Thomas S. Lane, of Bronte, Tex., writes to the *Medical Brief*. that for twenty years he has used, with decided success:

Potassii nitratis	3iv
Aq camphoræ	3j

M. Sig.: One teaspoonful in a half-wineglass of water every fifteen minutes until relieved.

Pills for Chronic Bronchitis.

Ammonii chloridi	gr xv
Ammonii carbonatis	gr xv
Pulv ipecac	gr iii
Morph hydrochloratis	gr i
Mucilaginis acaciæ	q s

Divide into 10 pills, one to be taken night and morning.

—*Medical Press and Circular.*

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

MEDICAL PRESS.

Dr. Seymour Taylor writes on

Chlorosis.

This affection rarely shows itself in a woman who has borne children, and is most commonly seen in virgins from fourteen to twenty-five years old.

The symptoms are of course well known: pallor, breathlessness on exertion, dyspepsia, constipation, usually scanty menses, etc.

Physical examination usually shows venous humming, a marked systolic murmur in the pulmonary artery, marked tympanitic resonance in one or both flanks, but usually no organic disease of any kind.

Frequently the victims of this disorder are confined to a shop or workroom and therefore cannot take exercise, but occasionally they are the children of wealthy parents, and will then be found indisposed to any avoidable exertion. Constipation is probably present in every case, although unless closely questioned on this subject a patient will usually give misleading answers.

Chlorosis appears to be a severe neurosis which if neglected is apt to terminate in gastric ulcer. That the ulcer is not present at the outset in those cases in which it is found later is shown by the absence of hæmatemesis, although the other classical symptoms are usually to be found.

Subjects of chlorosis are usually found to have a craving for pickles, acids, unripe fruit, etc., and the use of these must be stopped in treatment.

The treatment which gives greatest satisfaction is purgation by any means preferred, but usually by Epsom salts, followed by the use of increasing doses of some of the alkaline iron preparations. Iron, when given without the preliminary purge, is useless.

The dyspepsia usually accompanying this disease is promptly relieved by alkalies, and a favorite combination is that of bicarbonate of soda, aromatic spirits of ammonia, dilute hydrocyanic acid and compound infusion of gentian.

JOURNAL OF NERVOUS AND MENTAL DISEASES.

Dr. R. K. Macalester reports

"A Case of Multiple Neuritis."

An Italian laborer, nineteen years old, had been unsuccessfully treated for rheumatism in the arms and legs for several weeks. When seen he complained of pains in the head, chest, legs and feet; had poor appetite, regular action of the bowels, no lesions of lungs or heart.

The patient could only stand and walk when supported, and then his gait was paretic and the feet were dragged. The eyes were normal, the extensors of the wrist and flexors of the feet were weak and somewhat atrophied, wrist and foot drop present and knee and elbow reflexes absent. The reaction of the extensors of the wrist and flexors of the ankles is feeble to the faradic current, (the only one tried.) An area of delayed sensation was found along the front of each leg. At four weeks after the onset the muscles reacted to a faradic current (though a relatively strong one) the prognosis was favorable and was subsequently confirmed.

The treatment adopted was a single dose of ten grains of calomel, $\frac{1}{12}$ grain strychnine sulphate *t.i.d.* raised subsequently to $\frac{1}{24}$ grain, massage, nourishing food, and the use of the faradic current.

Dr. Charles Henry Brown reports a case of

Infantile Amyotrophic Lateral Sclerosis of the Family Type.

The patient is a boy fifteen years of age, of German parentage, and about whose early history very little information is to be had.

The first symptoms were noticed three years ago and were inability to whistle and to talk plainly. The progress was so rapid that in a week the patient could not without effort move his tongue, whistle nor swallow. Soon there was inability to laugh or entirely close the eyes, and the least exertion caused difficult breathing. The hearing began to deteriorate. Then came inability to button or unbutton the clothes and rapid wasting of the muscles. Twitchings began to be felt in various muscles.

Plates from photographs show that there is lateral atrophy of the tongue and very little power over the organ. All the muscles of the throat and neck are much affected and the diaphragm appears to be also. Respiration is very greatly interfered with. Fibrillary twitchings, exaggerations of the reflexes and retraction of tendons completes the description.

The age and the fact that although the case grew worse until six months ago it then came to a standstill shows that this cannot class as a case of ordinary amyotrophic lateral sclerosis. In other respects the symptoms agree.

Dr. Charles K. Mills and J. W. McConnell report

A Case Indicating the Location of the Naming Centre in the Temporal Lobe.

The patient was a married woman forty years of age, who began to complain of numbness in the back of her neck, with vertigo and an excessive attack of vomiting lasting two days. For three years nothing peculiar was noted, but it was then seen that the patient was acting in an unusual manner. She had been a skilled dressmaker, but now

did inferior work, hung a printed certificate upside down, etc. She woke one morning complaining of hallucinations, acted strangely and toward night had a convulsion attended with unconsciousness. She was now confined to bed for a couple of weeks, seemed to age rapidly, had severe headaches and verbal amnesia. This suddenly increased with a couple of attacks of vertigo. Ophthalmoscopic examination showed the absence of optic neuritis, but there was left lateral homonomous hemianopsia.

There was word blindness without letter blindness. Right sided paralysis without anæsthesia appeared and progressed. Finally death occurred five years after the first symptoms. An autopsy showed a small nodular, partly disintegrated mass about the size of a hickory nut at about the posterior fourth of the third temporal convolution. The surface of the second, third and fourth temporal convolutions in their posterior half were granular and somewhat disintegrated.

A hard, yellowish-brown tumor was found in the temporal lobe mainly in the third and second temporal convolutions, almost entirely in the white matter of the third. Microscopically this was shown to be a glioma, and it almost certainly started in the third temporal convolution at the posterior extremity of the horizontal branch of the fissure of Sylvius.

Dr. F. Savary Pearce reports an

Unusual Case of Locomotor Ataxia.

The patient is a man of fifty-one years who has a good family history, but has had a good deal of care in nursing an invalid wife. About a month ago he rose from his desk apparently in good health, walked to his office door, had a sudden slight vertigo, and developed double vision which persisted.

The second day after this some numbness around the rectum, scrotum, and glans penis was noticed. A few days later weakness about the knees was complained of and a few nights later a sense of darkness before the eyes followed by a sense of heat and quivering about the nape of the neck with great rapidity of pulse heat. Then there began a jerking and quivering of the whole body, and the attack was repeated twice with less severity. Next morning he felt weak and walking on bricks gave the feeling of walking on a carpet, while walking on a carpet felt like soft pillows. This sensation persists. Slight numbness in the extremities developed The only approach to a crisis is an occasional twinge in the lypochondrium and in the calf of the leg.

Besides the sudden onset, and the absence of Argyll Robertson pupil this case is peculiar in that the wife of the man has posterior sclerosis of twenty years standing, which first appeared with diplopia which suddenly left her three months later and that it was one year after the onset in her case, before she had any symptoms of weakness in the legs.

The treatment used for this case is massage, bichloride of mercury, and injections of Brown Sequard's fluid. Some benefit seems to have resulted but the patient has been under the treatment a very short time only. Syphilis seems positively excluded in these cases.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

GYNECOLOGY.

Curative Effect of Baths in Diseases of Women.

Dr. F. H. Davenport (Boston *Med. and Surg Jour.*) says:

The treatment by baths plays an important part in gynecology, especially in the class of cases characterized by exudates of the pelvic peritoneum. What is ordinarily meant by the term exudate, may be divided into two parts: (1) the true serous, fibrinous or purulent collections in the pelvic structures; and (2) the peri- and para-metric connective-tissue bands and ciatrices, which must be regarded as the results of the other group. While the treatment of the first class of cases by balneotherapy shows most brilliant results, even an absolute *restitutio ad integrum*, in the case of adhesions and chronic thickenings the effect is merely symptomatic, reducing sensitiveness, relieving pain, and favoring general improvement.

According to Durhrssen (*Centralblatt fur Gynakologie*) these cicatrices do not in themselves cause pain, but favor the establishment of endometritis which is relieved by the baths. To be sure, the endometritis can be ordinarily more easily cured by curetting and cauterization, hence the latter measures should be tried before a course of baths.

Permanent results are not to be expected in cases of (1) retroflexion of the uterus with adhesions, (2) fixation of one or both ovaries by peri-oophoritic bands, (3) collections of pus in tubes or ovaries, as often occurs in connection with gonorrhœal infection. Appropriate treatment of the third class is laparotomy with removal of the diseased organs; of the first and second, forcible separation of the uterine and ovarian adhesions, and consequent increased mobility of the organs under anæsthesia. The movable uterus is then replaced, and (according to Schultze) held by a pessary. Duhrssen, on the contrary, prefers vaginal fixation, and later massage, as advised by Chrobak. The mobility of the

ovary should be maintained by massage after the method of Thure-Brandt.

It is therefore essential, in order to select appropriate cases for treatment by baths, in the first place to establish a correct diagnosis.

The Treatment of Endometritis.

Dr. C. C. Frederick (*American Journal of Obstetrics*), says:

The treatment of inflammation of the uterine mucous membrane is as important as its prevention, and much more difficult. Intra-uterine medication as ordinarily practiced in the physician's office is useless; more frequently it is positively harmful. It is the experience of every gynecologist that many of the cases which come to him with pelvic inflammation give a history of painful intra-uterine medication at their physicians' office extending over a period of months, perhaps, the patient's condition meanwhile steadily getting worse. The dirty uterine sound and intra-uterine medication have caused more serious disease in women than the conditions for which the treatment was given would ever have produced.

In the treatment of these cases we should not forget constitutional conditions which may cause some of the symptoms which we are apt to ascribe to local disease. Tonic treatment will do much for these. I have seen several malarial subjects with profuse uterine catarrh entirely cured by anti-malarial treatment.

True endometritis is best treated by thoroughly dilating the cervical canal, removing the diseased membrane with the sharp curette, and thoroughly disinfecting the cavity, which may then be packed with fodoform gauze to insure good drainage. In spite of all that has been written against dilating the cervix and uterine cavity, provided there be no extensive disease of the uterine appendages the operation is as safe as any in gynecology, if done with thorough antiseptic precautions, with thoroughly disinfected tents. A laminaria or tupelo tent can be rendered aseptic. Endometritis cannot be treated successfully in any of its forms without good dilatation of the cervix as a primary step.

Prevent puerperal infection by practicing antiseptic midwifery; discourage attempted abortions on the part of your patients; have your patients' lacerated cervices and perinei repaired before they lead to diseased conditions; build up your female patients' general health; do very little or no intra-uterine medication; cure their endometritis, whether due to gonorrhœa or other causes; correct displacements, if there be no chronic tubal or ovarian trouble or adhesions—and you will prevent much of the pelvic disease for which hundreds of capital operations are done every week.

Laparotomy for Pelvic Disease. Why Continue it?

The teachings of Lawson Tait in the field of abdominal surgery for disease of the female appendages have, like all improvements of great merit in modern times, been followed by a great deal of good, and at the same time a great deal of evil has followed in the wake of his followers. The adoption of his methods has brought relief to thousands, death to hundreds and the exchange of one misery for another in scores of others. Tait raised modern gynecology to a high plane, but now after more than a decade observation we ought to advance still higher and accomplish more for women than has yet been achieved. Laparotomy for pelvic disease is being done less often now than formerly, the newer procedure being to attack the disease through the vagina, as advocated by Pean in 1891. Other operators have continued the work, and we can no longer resort to laparotomy for pelvic diseases and tumors occupying the pelvic or even the lower abdominal segment. The writer agrees with Jacobs that 85 per cent. of women requiring removal of the appendages have been infected with gonorrhœa, and advocates the total ablation of uterus and appendages when any operation is attempted, claiming that as the disease has infected the uterus it would be worse than useless to remove the appendages and leave the uterus as a source of subsequent infection.

Laparotomy was frequently followed by hernias, fæcal fistulas, returning sutures, etc, But Jocobs states that in not a case of recovery from total extirpation is there a troublesome sequela. Cases amenable to operation through the vagina are fibroids of medium size, small ovarian cysts, large ovarian cysts without adhesions, parovarian cysts. These may be operated upon with or without total extirpation of the uterus. The writer strongly condemns leaving ligatures imbedded in infected tissues which are bound to communicate the infection to the peritoneal cavity, and leaving the infected stumps of infected tubes. He thinks the time has come when the universal custom of opening a women's abdomen by laparotomy for every ailment of her pelvic basin should be abandoned.

In 140 cases of total extirpation by vagina, Jacobs had a mortality of 1.4 per cent. Tait states that a mortality of 3 per cent. is allowable in laparotomy for removal of the appendages. The average time a patient is confined to her bed after a total extirpation is about eight or nine days, while after a laparotomy it is about twenty-one days.—*R. Stanbury Sutton, M.D., N. Y. Med. Jour.*

For Removal of Warts

R. B. Morrison:

Hydrarg bichlor	grs. v.
Acid salicyl	3i.
Collodion	3i.

M.—Apply once a day, removing the crust each time before a fresh application is made. If necessary the mercuric chloride may be increased to 30 grains in the same amount of collodion.

Four applications are usually sufficient for removal by gentle traction; after which dress with simple ointment, as may be necessary.

PHYSIOLOGY.

Physioloy of Intestinal Peristalsis.

Dr. P. Grutzner (*Deutsch. Med. Wochnschrift*), has demonstrated that although as a rule fluids introduced into the rectum are at once absorbed, in some cases, however, he observed that colored fluids introduced into the rectum of animals could be detected some hours later in other portions of the alimentary canal and especially in the stomach. This led him to a series of experiments, and employing small solid particles he found that they would be transported to the stomach after introduction into the rectum. He observed that if a small quantity of a mixture composed of equal parts of powdered animal charcoal and 0.6 per cent. salt solution were injected into the rectum of an animal, which had been allowed to fast for twenty-four hours before the introduction of the mixture, after the lapse of about four to six hours, the animal being killed, small quantities of the charcoal were present in various parts of the intestine, but particularly in the stomach. In carrying out a similar series of experiments upon the human subject, using starch and table salt for these purposes, G. found that after some hours the starch could be detected present in the contents of the stomach.

The cause of this antiperistaltic movement G. ascribes to the chemical consistency of the fluid with which the particles are mixed, this upward movement invariably taking place when the substances were mixed with a weak solution of table salt, but never when suspended in plain water or other solutions. The table salt seems to act directly upon the mucous membrane of the rectum and occasions this "upward movement," or antiperistalsis. The upward movements take place in spite of the large masses of fæcal matter driven downward, but are confined, however, only to the peripheral portions of the intestinal lumen.

An Easy and Physiological Method of Keeping Warm.

It simply consists in taking deep inspirations.

The physiological modus operandi, whereby warmth can be afforded to our body when cold by drawing deep, forcible inspirations, taking care, moreover, to hold the air as long as possible before expelling it, is simplicity itself. Muscular action being then directly induced, that of the lungs ensues, alternate pulmonary contraction and expansion obviously acting on the general circulation as a pair of bellows on a sluggish fire, while, moreover, the act of inspiration must necessarily take in more oxygen from the outer atmosphere, and it will again be recalled here that the more thoroughly the blood is oxygenated the more internal heat will be generated thereby.

The author states: "So simple an expedient can be very readily put in practice by any one, and those to whom I have recommended its trial unanimously have described the same results as I have myself experienced when doing so on an exceptionally bitter cold day. Not many exhalations were in any of these cases needed to be taken before a gradual sense of growing warmth, of correspondingly decreasing discomfort, began to assert its presence throughout the person; the internal spasmodic shivering too often felt beneath the protection of the thickest greatcoats gradually faded out of sensation; the ears and nose, but a few minutes previously asserting their retained existence by an almost sore numbness, in their turn would then become comfortably warm after their normal fashion; then, finally, hands and feet which had previously seemed destined to proclaim shoes and gloves as utterly devoid of any protective utility whatsoever, in their turn become permeated with the same satisfactory sense of restored habitual condition of sensibility and warmth."– *T. Brindley James, F. R. C. P.* (*Med. Times & Gaz.*)

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FIFTEEN DAYS ENDING FEBRUARY 23, 1895.

Captain Henry P. Birmingham, Assistant Surgeon is relieved from duty at Fort Grant, Arizona Territory, and ordered to Fort Trumbull, Conn., for duty relieving Captian Freeman V. Walker, Assistant Surgeon.

Captain Walker on being thus relieved will proceed to Fort Grant, Arizona, and report for duty at that post.

The extension of leave of absence granted 1st Lieutenant Henry C. Fisher, Assistant Surgeon, is further extended one month.